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ABSTRACT

To understand better the factors involved in students' decisions to pursue graduate study in the natural sciences, mathematics, and engineering (NSME), this study surveyed a stratified sample of 1,651 NSME majors who took the Graduate Record Examination General Test in December 1990, planning to enroll in graduate school. The survey asked for background information and career expectations and plans, including choice of graduate school program. Survey responses and the GRE records of students planning to continue in NSME were compared with those of students planning to change fields of study. The decision to change fields was not related to GRE scores, gender, parents' education, or ethnicity. Parental approval was also unrelated to the decision to continue in NSME. Those who planned to change fields for graduate study liked their undergraduate courses less, had more trouble seeing themselves as scientists, found the courses more difficult, and had slightly lower grades. The report suggests that science and engineering students do not always have a realistic view of the work options that will be open to them. Seven appendixes present supplemental information including: the GRE background questionnaire, matrices of questionnaire items, GRE scores, and other variables. (Contains 33 references.) (SLD)

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Graduate Enrollment Decisions of Undergraduate Science and Engineering Majors: A Survey of GRE Test Takers

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Graduate Enrollment Decisions of Undergraduate Science and Engineering Majors

A Survey of GRE Test Takers

Jerilee Grandy

GRE Board Report No. 85-01P

November 1992

This report presents the findings of a
research project funded by and carried
out under the auspices of the Graduate
Record Examinations Board.

Educational Testing Service, Princeton, N.J. 08541

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Acknowledgments

When I inherited this project two years ago from my colleagues, Willie Pearson and Don Powers had already amassed several boxes of notes based on countless hours of interviews and discussions with science students. I am greatly indebted to them, for without their conceptualization and initiation of the project, the survey would not have been conducted. I also wish to thank them for their ongoing interest in the study, their suggestions as it progressed, and their very thoughtful reviews of the final manuscript.

Important literature on the public perception of science and the image of the scientist was brought to my attention by Gerald LeBoff.

I am grateful to Nancy Robertson for her enthusiasm for the project, her careful sampling and analysis of the survey data, and, above all, her never-ending willingness to run "just one more analysis."

Abstract

To understand better the factors involved in students' decisions to pursue graduate study in natural sciences, mathematics, and engineering (NSME), this project surveyed a stratified sample of 1,651 NSME majors who took the GRE General Test in December 1990 and planned to enroll in graduate school. The survey asked about their undergraduate experiences, the quality of their departments or programs, ratings of their own skills, expected earnings after completing graduate school, characteristics of the jobs they would most like to have, importance of various job characteristics and activities, when they decided on their graduate fields of study, opinions about those fields, and family background, including whether parents were in technical occupations and whether they approved of their fields of study.

We compared the survey responses and GRE records of students planning to continue in NSME with students planning to change fields of study. We found that the decision to change fields was not related to GRE scores, gender, parents' education, or ethnicity.

Half of all respondents, both women and men, had fathers in technical, mechanical, or scientific occupations, but considerably more women than men had mothers in those occupations. While almost all respondents reported that their parents approved both of their undergraduate and graduate major field selections, slightly more White than Black respondents reported parental approval, and slightly more males than females reported parental approval. Parental approval was unrelated to whether they remained in NSME or not.

Compared with students continuing in NSME, students who planned to change fields for graduate study liked their undergraduate courses less, had difficulty seeing themselves as scientists or being able to make a contribution in the sciences, did not receive as much encouragement from instructors to continue in NSME, had slightly lower grades in their major, found the courses more difficult, felt they had less in common with their peers, and rated the department and quality of instruction lower. They also rated their verbal skills somewhat higher and spent more hours in community service. Those leaving NSME presented a profile of more socially oriented individuals concerned more with helping people than in working with "things." Those leaving their fields expected to earn less after graduate school. Among those remaining in NSME, Black respondents expected to earn the most and White respondents expected to earn the least. The expected earnings of women were lower than those of men.

We speculated that a negative stereotypic image of science and engineering might prevail, not only in our society at large, but even among students of science and engineering. Some students for whom it is important to make a contribution to society, to interact with people, to have an attractive work environment, and to have variety in their work are leaving the sciences. These occupational characteristics were important to more women than men and to more minorities than Whites in our sample. The report suggests that science and engineering students do not always have a realistic view of the work options that will be open to them, and that they need to have a broader picture of the many varieties of work and work environments available in science and engineering. The report also suggests that more able students of both genders and all races might choose to continue in science if they knew more about its possibilities.

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INTRODUCTION

According to some information sources, including the National Science Foundation, the Bureau of Labor Statistics, the Bureau of the Census, and a number of university economists, the next decade may see a shortage of natural scientists, mathematicians, and engineers in the United States (Atkinson, 1990; Berryman, 1983; Holden, 1989; & Pool, 1990). This shortage is predicted for several reasons.

First, the college-age population is declining. Reports from the Census Bureau indicate that over the past decade, the number of 18-year-olds in the United States declined by 12% (U.S. Department of Commerce, 1989). Although there are increasing numbers of older students in our colleges, science and engineering are generally not the fields of choice for second careers.

Second, the proportion of White males in the college-age population is declining because of increasing numbers of minorities in the United States. Traditionally, science and engineering careers have been chosen in greatest numbers by White males. Although admission credentials (such as GRE and SAT scores) of minorities, especially Blacks, have been increasing in recent years, and some schools offer programs to encourage minorities to study science and engineering, the numbers who do so are still exceedingly small (Clewell, 1989; Malcom, 1983; Thomas, 1989). According to the most recent statistics (National Research Council, 1991), between 1975 and 1990, the percentage of all doctorates awarded to U.S. citizens in the physical sciences, life sciences, and engineering increased slightly for Native Americans, Asian Americans, and Hispanics. The percentage awarded to Blacks, however, increased only in engineering, and the increase was from 0.7% to 1.5% -- figures that are far less than the proportion of Blacks in the U.S. college-age population. Furthermore, the percentage of doctorates awarded to Blacks in physical sciences and life sciences actually declined during that period. Data from the 1990 American Chemical Society Salary Survey reveal that Black chemists -- both men and women -- represented less than 2% of the membership who responded to their survey (Smith, 1991).

The reasons for the underrepresentation of minorities may be numerous. Pearson (1985) conducted an in-depth sociological analysis of Blacks in the American scientific community. He found that the four most frequent reasons given for Black underrepresentation in natural sciences were (1) lack of early encouragement and motivation, (2) lack of financial support and limited opportunities, (3) limited recruitment, and (4) institutional racism.

Although minorities, especially Blacks, continue to be underrepresented in the natural sciences and engineering, females are also underrepresented, especially at the doctoral level, and particularly in the physical sciences. There has been considerable concern and research on the subject, ranging from early childhood influences on female career choices to the employment status of women scientists (e.g., Casserly, 1979; LeBold, 1987; National Research Council, 1983, 1987; Vetter, 1981).

Salary levels may be implicated in the underrepresentation of women. For example, reports published by science and engineering societies still indicate that women generally earn less than men. The 1987 median salary of Ph.D. physicists with seven or more years of experience in academia was $40,800 for females and $48,000 for males; for Ph.D. physicists in industry with the same experience, women earned an average of $56,700 and men earned an average of $63,000 (Babco, 1990). On the other hand, reports from the American Mathematical Society indicate higher salaries for women than men with Ph.D.s in mathematics. In 1989, male Ph.D.s with 12 months experience in business and industry earned an average of $45,000 but female mathematics Ph.D.s earned an average of $48,000 (Babco, 1990). There were similar salary differences in academic positions.

A third reason for predicting a shortage of natural scientists is that even among the most exceptionally able high school students, there has been a declining interest in majoring in mathematics or natural sciences (Grandy, 1987).

In recent years, some have speculated that the public's image of science has changed, partly because television and newspapers have a powerful impact on public opinion. Communication specialist George Gerbner, dean of the Annenberg School of Communications at the University of Pennsylvania, argues that television entertainment programming encourages hostile public conceptions of science (Gerbner, 1987). In a detailed analysis of a ten-year sample of network prime-time dramatic programs, he found that scientists (other than doctors) are portrayed as "stranger" than other professionals. He also found that for every "bad" doctor, there are 19 "good" doctors; for every "bad" law enforcer, there are 40 "good" ones; and for every villainous scientist, there are only 5 who are virtuous. Furthermore, a telephone survey of 1,631 repondents conducted by the Public Opinion Laboratory at Northern Illinois University concluded that the more people watch television, the less favorable they are toward science, even controlling on background variables such as age and education (Gerbner, 1987).

In a *Science* editorial, Abelson (1990) commented, "For most of the public, the word 'chemical' now elicits antipathy and fear." Also, it has become evident that a large segment of our society no longer glorifies science, and events such as Earth Day highlight the public perception of scientists as makers of problems, not solvers of problems (Grandy, 1990a).

Unlike the SAT data base, the GRE data base has not shown a decline in enrollments in all natural science fields. The number of U.S. citizens taking the GRE and planning to earn doctorates either in mathematics or in physics, for example, both increased slightly over the past decade (author's analysis). However, the number planning to earn doctorates in the biological sciences, geology, and chemistry declined. Among the reasons given for the decline are limited research funding (Palca, 1990). There are many factors other than economic ones that affect career decision making, however. Numerous studies have found associations between family background, ethnicity, gender, school experiences, course-taking patterns, and the decision to pursue a degree in the sciences or to choose (or switch to) other majors (e.g., Baker, 1982; DeBoer, 1984; Hewitt & Seymour, 1991; Hilton, Hsia, Solorzano, & Benton, 1989; and Hilton & Schrader, 1986). Few studies, however, have focused on reasons people change field of study after they have earned a bachelor's degree.

BACKGROUND FOR THIS PROJECT

This project was initiated by Pearson and Powers (1986) in a proposal to the GRE Board containing a preliminary analysis of selected GRE General Test data from 1984-85. From their preliminary analysis, Pearson and Powers concluded that significant numbers of undergraduates majoring in the biological sciences, physical sciences, mathematical sciences, and engineering planned to pursue graduate study in some other discipline. Their analyses further revealed a number of relationships between the backgrounds and experiences of undergraduate science majors and their intentions to pursue graduate degrees in these fields or to switch to other fields. Women and older students were more likely to leave than were men and younger students. Blacks were more likely to leave than Whites, and Whites were more likely than Asian Americans to leave.[1] Those migrating to other fields tended to have lower GRE quantitative scores and higher GRE verbal scores than did those persisting in natural sciences, mathematics, and engineering. Not surprisingly, there was a strong relationship between GPA in major field and whether or not students intended to pursue graduate study in the same field.

Based on these preliminary findings, Pearson and Powers proposed a questionnaire survey of natural science, mathematics, and engineering majors to determine more precisely the factors that may underlie students' decisions to pursue graduate study in those fields or to change disciplines.

As a first step, they held a number of "focus groups," convening science students attending colleges in the Philadelphia area. Discussions centered on students' graduate school plans and their reasons for choosing a graduate field of study. One major outcome of the discussions was the realization that there is no agreed-upon standard of what constitutes a change in field of study. From one viewpoint, for example, a biology major who studies forestry in graduate school has changed field of study. Forestry is often classified among the agricultural sciences, not under biological sciences. Yet, if the student's interests are in plant life, particularly trees -- a subject that may be subsumed under biology, botany, forestry, and/or ecology -- the student may see the change from biology to forestry as no change at all, but, rather, a natural outgrowth of undergraduate studies.

It became clear that the proposed questionnaire survey would have to deal with the taxonomies of major fields, considering why they are grouped as they are. Then, reconsidering the purpose of the survey, "change in field" would have to be defined in a manner that would best provide the information sought by the survey.

In the meantime, other research was being conducted on the GRE data base to shed further light on talent flow from undergraduate to graduate school. A special data base was created for that purpose and further, and the kind of data Pearson and Powers had explored in their preliminary analyses was examined (Grandy and Robertson, 1992).

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[1] Hilton et al. (1989) found different results among high-ability students at an earlier stage of their education. They found that persistence in math, science, and engineering from senior year of high school to sophomore year of college was higher for high-ability minority students (61%) than for the high-ability White comparison group (55%).

We found that over the past decade, the number of female test takers planning graduate work in the physical sciences and engineering increased very little. On the positive side, we found that the number of Black as well as other minority-group test takers planning graduate work in the physical sciences and in engineering increased significantly.

More important, perhaps, were the graduate-school plans of majors in mathematics, natural sciences, and engineering. Most undergraduate mathematics and physical sciences majors continue in the same fields in graduate school. Those who changed did not necessarily have the lowest GRE scores, as some might have predicted. In fact, the quantitative score averages of those who plannd to switch to the humanities were a few points higher than the averages of those continuing in math/physical sciences. About 5.5% switched to education, and those students had quantitative scores averaging only 15 points less than the nonchangers.

Almost all engineering majors planning to apply to graduate school continued in engineering. Those few who switched to education, however, had quantitative scores about 80 points lower, on the average, than those of engineers who remained in engineering.

Test takers earning degrees in the biological sciences changed to other fields for graduate study more frequently than did test takers in the other natural sciences. Those continuing in some area of biological sciences had scores slightly higher than the scores of those planning to enter health professions (because not all applicants to health professions take the GRE, the ones who do are likely to be a nonrepresentative sample). Biological science majors who switched to math/physical sciences had average quantitative scores about 35 points higher than the scores of those continuing in biological sciences. Those switching to education had scores about 50 points lower.

Among all undergraduate students of science and engineering, those who switched to education had considerably lower average GRE verbal scores than did those who remained in their field, and those who switched to the humanities had higher verbal scores. Aside from these general patterns, however, we could not fully account for students' choices to leave science or engineering. For the most part, those who changed fields had test scores that were probably high enough to suggest that they could succeed at science. We could not simply conclude that people who leave science and engineering for another field of graduate study do so because they lack sufficient verbal or quantitative skills. Furthermore, the variables in the GRE background questionnaire did not shed might light on the reasons for leaving science.

With this foundation, we returned to the plan for a questionnaire survey. As a first consideration, we established a working definition of "change in field of study" based on the potential postbaccalaureate workforce supply in natural sciences, mathematics, and engineering. We defined change simply as a flow of students out of that pool. Furthermore, although it may be interesting to know why someone chooses to switch fields from one physical science to another, for example, to switch to computer science after majoring in physics, it was not the human resource question we were investigating.

The concerns this study addressed were fourfold: (1) the total supply of mathematicians, biological and physical scientists, and engineers; (2) the number of women and minorities contributing to that supply; (3) the number of natural science and engineering students who are leaving that pool by choosing graduate work in a different area, and (4) factors that may explain why some students continue in mathematics, natural sciences, and engineering and others leave.

We decided to restrict the survey to a test-taking population who could all answer the same questionnaire. Students who have already graduated -- who have been in the workforce or who have been homemakers -- might have very different reasons for changing majors than currently enrolled students have. Including these older students would have required devoting large portions of the questionnaire to work experiences, and these portions would have had to be omitted by students still in college. At the same time, an out-of-school test taker's graduate school decisions might be less influenced by undergraduate experiences than by events occurring on the job or within the family. Thus, for the out-of-school test taker, many detailed questions about professors and coursework would not be germane. Therefore, because the questionnaires would have had to be markedly different, we decided to restrict this survey to currently enrolled students.

QUESTIONNAIRE SURVEY

Natural Sciences, Mathematics, and Engineering Population

Creation of a Working File. A working file of undergraduate natural science, mathematics, and engineering (NSME) majors was created from the tape containing the records of all people who registered for the December 8, 1990, GRE General Test administration. Appendix A provides a copy of the GRE background questionnaire. On the basis of responses to the questionnaire, we selected for the working file all examinees who satisfied the following conditions:

1. They took the examination and received GRE scores.

2. They were U.S. citizens (Question 13.a = 1).

3. They answered the questions on gender (Question 8), degree objective (Question 13.k), and intended graduate field of study (Question 13.l). If they were undecided about their graduate field, they were excluded.

4. They answered Question 13.d, ethnicity. If they marked "other," we excluded them because we regarded statistics on an unknown ethnic group as relatively uninformative.

5. They planned to attend graduate school (Question 13.f = 1, 2, or 6 only).

6. They had not yet graduated.

7. They had a U.S. mailing address.

8. They expected to receive a bachelor's degree in biological sciences, physical sciences, computer sciences, earth sciences, mathematics, or engineering. Based on the response to Question 13.l, an examinee was included if the

response code was in one of these areas. Appendix B gives the codes and fields used to define each area.

From an original file of 121,982 records, the working file contained data for 5,929 examinees.

Defining "Change of Major." As stated earlier, we used a fairly straightforward criterion of "change in major." Because the purpose of the survey was to identify some of the differences between people who remain in NSME and people who leave these fields, we regarded "changers" as those who planned graduate study in a field that lay outside these three areas and "nonchangers" as those who remained within these areas. A changer, therefore, was someone who left the pool of NSME for another field.

Under this definition, a student who planned to teach mathematics or science in high school might plan graduate work in education. We did not regard this decision as changing out of the potential NSME workforce. We know from the GRE data base that among students with degrees in mathematics and science, those who plan graduate work in those fields have somewhat higher average test scores and grades than do those who plan graduate work in education. This is well known, and there is no need to reconfirm it. The focus of the study, rather, was on factors that may contribute to a student's decision to abandon NSME altogether. Therefore, students specifying secondary education as an intended field of study were assumed to be potential teachers of science or mathematics and were therefore classified as nonchangers.[2]

Referring to the list of major field codes on the third page of the GRE background questionnaire (Appendix A), we defined change as occurring when the student planned graduate study in a field with a code beginning with 17 or higher, excluding code 36 (secondary education). Fields coded 17 or higher lay outside the NSME fields included in the study. The excluded fields were primarily in the social sciences (including psychology), humanities, and business. We did not exclude changes to code 01 (agriculture) or to code 06 (health and medical sciences) because graduate work in these fields can be a natural outgrowth of undergraduate science degrees, and many biology majors, in particular, plan to enter medicine, dentistry, veterinary medicine, or nursing.

Stratification and Sampling

Stratification. The vast majority of records in the working file belonged to White test takers who were not changing fields from NSME. Minorities, females, and students leaving these fields were relatively small in numbers. Thus the three stratification variables were gender, ethnicity, and change of field.

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[2] It is also worth noting that very few students fell into this category. Only three minority students, for example, planned to switch to secondary education, and only one male in the entire survey sample planned to switch (from mathematics). Most of those planning a switch to secondary education were White females, all of whom were earning bachelor's degrees either in mathematics or biological sciences. Even they constituted only 2% of the female survey sample.

Crosstabulating race by gender, we obtained the following numbers in the working file:

	Male	Female	Total
American Indian	43	22	65
Black	191	226	417
Mex. American	55	28	83
Asian American	223	129	352
Puerto Rican	39	34	73
Other Hispanic	46	27	73
White	3,241	1,625	4,866
Total	3,838	2,091	5,929

Because the number of minority examinees in each race-by-gender group was quite small, and because minorities totaled only 1,063, we included all minority examinees in the survey sample.

To constitute the remainder of the desired sample of 2,500, therefore, we chose a stratified sample of White examinees out of the remaining working population of 4,866. We stratified the population according to whether or not they were leaving NSME. Only a relatively small number of students -- 103 White males, and 69 White females -- actually planned to change. We included all 172 of these students in the sample.

Of the remaining White examinees (nonchangers), we selected spaced samples: one fifth of the White males, and two fifths of the White females. The survey sample of White examinees, therefore, contained 730 males (103 who changed plus 627 who did not change) and 691 females (69 who changed plus 622 who did not change).

The final sample came to 2,484 examinees.

Description of the Sample. The table on page 8 summarizes, for each race-by-gender group, the distribution of undergraduate major field areas in the sample selected.

It is clear from these numbers that the sizes of some cells were quite small or zero. It would take a very large population of GRE takers -- probably decades' worth -- to have enough female Puerto Rican computer science majors to draw inferences about that group. The intention here was not to draw inferences about each and every minority population or each major field separately. Rather, we were interested in representing all minority test takers in NSME to the fullest extent possible within the limits of the available data.

Survey Sample: Numbers Mailed

Undergraduate Major

		Biological Sciences	Physical Sciences	Computer Sciences	Earth Sciences	Math Sciences	EngineeringTOTAL
American Indian							
Male	12	9	5	2	2	13	43
Female	11	1	0	2	1	7	22
Black							
Male	24	37	21	3	20	86	191
Female	83	37	23	4	23	56	226
Mexican American							
Male	8	7	2	1	4	33	55
Female	14	4	0	1	4	5	28
Asian American							
Male	40	20	16	4	7	136	223
Female	47	9	6	4	16	47	129
Puerto Rican							
Male	7	4	1	1	3	23	39
Female	21	4	0	0	2	7	34
Other Hispanic							
Male	11	5	3	1	5	21	46
Female	15	2	0	2	1	7	27
White							
Male	165	122	55	44	70	274	730
Female	334	90	18	48	97	104	691
TOTAL							
Male	267	204	103	56	111	586	1,327
Female	525	147	47	61	144	233	1,157

Questionnaire Design

We designed a seven-page questionnaire inquiring about the student's undergraduate studies, career plans and expectations, plans for graduate study, parents' occupations, and parental approval of undergraduate and graduate fields of study.

There is abundant literature on theories of career decision making, and it was far beyond the scope of this project to review this body of literature. We were not testing any particular decision-making theory but attempting to incorporate, insofar as possible, elements of all factors that might have influenced students' career plans thus far, including parental influences and other sources of encouragement, undergraduate experiences, skills and abilities, the availability of role models, perceptions of the labor market, anticipated job rewards, personal working styles, values, and preferences.

The content of the questionnaire assumed a model in which graduate school plans might be influenced directly or indirectly by any or all of the following factors:

1. Family Influences

    Father's occupation (whether in an technical, mechanical, or scientific field)
    Mother's occupation (whether in an technical, mechanical, or scientific field)
    Father's education
    Mother's education
    Parental approval and encouragement
    Feelings of responsibility or obligation to family

2. Undergraduate Experiences

    Enjoyment of coursework
    Difficulty of coursework
    Quality of classroom teaching
    Quality of the department or program in which enrolled
    Relationships with and encouragement from instructors
    Relationships with fellow students
    Personal identification with a profession

3. Skills and Abilities

    Verbal abilities
    Quantitative abilities
    Study skills
    Problem-solving skills
    Interpersonal skills
    Mastery of coursework (grades, awards, achievements)

4. Characteristics of Chosen Graduate Field of Study

    Skills demanded
    Feelings of commitment
    Career opportunities
    Opportunity to make a contribution in the field
    Prestige
    Income
    Demand

5. Career Plans and Expectations

    Important job characteristics and activities
    Expected income
    Importance of income

The first part of the questionnaire consisted of three groups of items about undergraduate studies. For the first group, students indicated on a 5-point Likert scale the extent to which they agreed or disagreed with each item. The questions covered six aspects of undergraduate studies: enjoyment of courses, perceived course difficulty, quality of instruction, relationships with instructors, relationships with other students, and perception of self as a scientist.

The second group of items on undergraduate studies pertained to the quality of the department or program in which the student majored. The student rated each of 15 aspects of the department or program on a 4-point scale, from poor to excellent. The third group of items asked for self ratings in 13 different skill areas, including verbal skills, problem-solving skills, study skills, and interpersonal skills.

Part II of the questionnaire pertained to career plans and expectations. These questions asked about expected earnings, the importance of nine different job characteristics, and the extent to which they wanted jobs involving each of 22 different activities. On five bipolar scales, students rated the characteristics of the jobs they would most like to have.

Part III inquired about their plans for graduate study, including when they chose their graduate field. Seventeen items described their graduate field of study, to which they expressed agreement or disagreement on a 5-point Likert scale. These items covered career opportunities, necessary skills, difficulty of the field, interest in the field, and experience in the field.

The last part of the questionnaire asked several questions about students' families -- whether each parent was in a technical, mechanical, or scientific occupation, whether each parent approved of their undergraduate and graduate fields, whether professors encouraged them, and whether they had work experience in the field.

We also asked how different they perceived their graduate and undergraduate fields to be. This item could then be compared with our own judgments of whether the students had changed fields. Finally, we provided space for open-ended comments about their choice of a graduate field of study, asking for the important factors in its selection.

The entire questionnaire was designed so that all students could answer all questions, without decision branches. Results could then be compared between major field changers and nonchangers or between any other subgroups of interest.

The questionnaire was pretested among seven ETS staff members and one external professional, all of whom had bachelor's degrees in science. Two had continued in the same field for graduate school (chemistry and geology), two had switched to education, and the remaining four had switched to psychology or a closely related area. Based on the pretest results and discussion with each pretester, the questionnaire was revised. Appendix C contains the final revised questionnaire.

Survey Procedure

After the GRE tests were scored, we retrieved the records of science, engineering, and mathematics majors and created the working file. Questionnaires were mailed with a cover letter describing the purpose of the survey, with the suggestion that by completing the questionnaire, the student may benefit by clarifying their own thoughts and feelings about their future. A stamped, self-addressed envelope was enclosed. For attractiveness, floral postage stamps were used on both the outside envelope and the return envelope. As an added incentive, respondents were offered a summary of the results of the study for their participation.

After approximately three weeks we sent a postcard reminder (Appendix D) to all nonrespondents. After an additional three to four weeks, we sent another complete mailing -- a questionnaire, followup letter (Appendix E), and stamped return envelope. Questionnaires continued to arrive in sizable numbers for five months after the initial mailing.

Survey Response Rates and Nonresponse Bias

Usable questionnaires were received from 1,651 students (66.5%). All but a very few respondents were enthusiastic about the study, requesting results and writing comments and suggestions for further research. Fifty-one of the returned questionnaires were unusable because the post office returned them as undeliverable (14 questionnaires), or because the examinee had decided not to go to graduate school (22 questionnaires), or because they arrived after the analyses were underway (5 questionnaires), or because students had other, miscellaneous reasons for not completing the questionnaire.

We believe that many examinees did not respond because they had decided not to attend graduate school. Our earlier research indicated that only about 56% of all examinees become enrolled in graduate school in the fall semester after taking the GRE (Grandy, 1990b). We did not emphasize strongly enough, until the followup letter, that we wished for responses even if they decided not to enroll in graduated school.

For each broad undergraduate major field, the percentage of students who planned to change to a field outside NSME was as follows:

Biological sciences	2.0%
Physical sciences	2.2%
Computer sciences	8.8%
Earth sciences	2.7%
Math sciences	9.5%
Engineering	2.0%

The fields attracting the most changers were psychology, architecture, business, and "other" education. A total of 26 fields were included among the choices of changers.

The next table shows the distribution of undergraduate fields, by race and gender, of all 1,651 survey respondents. Comparisons of respondents with the total sample to whom questionnaires were mailed shows small but statistically significant nonresponse bias in the proportion of Whites versus minorities responding, the proportion of males versus females responding, and the mean GRE scores.

Survey Sample: Numbers Returned

	Undergraduate Major						
	Biological Sciences	Physical Sciences	Computer Sciences	Earth Sciences	Math Sciences	Engin-eering	TOTAL
American Indian							
Male	8	3	4	1	2	6	24
Female	8	1	0	0	1	6	16
Black							
Male	11	20	13	2	13	36	95
Female	48	20	9	2	14	39	132
Mexican American							
Male	5	4	2	1	4	24	40
Female	8	2	0	1	3	5	19
Asian American							
Male	26	14	12	4	6	89	151
Female	24	5	4	4	14	32	83
Puerto Rican							
Male	3	4	1	1	1	9	19
Female	11	2	0	0	1	4	18
Other Hispanic							
Male	7	3	3	1	5	13	32
Female	10	1	0	2	1	7	21
White							
Male	115	89	38	26	45	177	490
Female	237	65	16	34	76	83	511
TOTAL							
Male	175	137	73	36	76	354	851
Female	346	96	29	43	110	176	800

The response rates by ethnic group were as follows:

Response Rates by Ethnic Group

Ethnic Group	Number Mailed	Usable No. Returned	Percent Usable
White	1,421	1,001	70.4
Black	417	227	54.4
Asian American	352	234	66.5
Mexican American	83	59	71.1
Other Hispanic	73	53	72.6
Puerto Rican	73	37	50.7
American Indian	65	40	61.5
TOTAL	2,484	1,651	66.5

In the sample as a whole, 64.1% of the males and 69.1% of the females responded ($p < .05$). This gender difference in response rate also occurred in the White sample alone, where 67.1% of males and 74.0% of females responded. In the minority sample, 60.5% of males and 62.0% of females responded; the difference was not statistically significant.

There were equal proportions of changers and nonchangers among the respondents and nonrespondents, both overall and within the White and minority groups separately. Respondents had significantly higher weighed GRE score means than did nonrespondents. This was due only in part to the fact that the response rate was higher among Whites, and Whites earned higher average scores.

Mean GRE verbal scores (weighted)

	White	Minority	Total
Respondents	542	475	516
Nonrespondents	534	451	493

Mean GRE quantitative scores (weighted)

	White	Minority	Total
Respondents	655	616	640
Nonrespondents	644	590	617

Mean GRE analytical scores (weighted)

	White	Minority	Total
Respondents	638	555	605
Nonrespondents	614	523	569

It is not uncommon to find test scores to be higher among respondents to a survey and to find that more women than men respond. This is true, to some degree, even for the GRE background questionnaire and for the Student Descriptive Questionnaire completed by high school seniors when they register to take the SAT (College Entrance Examination Board, 1991; Grandy, 1988).

We speculated earlier that a large portion of the nonrespondents might have been people who did not plan to apply to graduate school after taking the GRE. If so, we might speculate further that a disproportionately high number of these students expected their scores to be too low for them to qualify for admission to graduate school. Although we cannot confirm these speculations with the data at hand, it may be useful to keep them in mind as possible explanations for the nonresponse bias we observe.

What is important to know about nonresponse bias is its effects. In this study we were more concerned with the relationships among variables, in particular the correlates of change in field of study. We therefore examined some of the correlates of change in our total NSME working file, before sampling, to see if the correlations or the conclusions drawn from the correlations differed from the conclusions we drew from our analyses of respondents.

What we found were that the correlations were approximately the same in the working file and in the respondent file, but that in the working file correlations reached different significance levels. The only two correlations that might affect our interpretations were with gender and with quantitative scores for Black males. In the responding sample, gender was not significantly correlated with change of field ($r = 0.028$); in the population it reached significance at the 0.05 level ($r = 0.030$). This is clearly a trivial difference, but it affects our interpretation if we take statistical significance seriously. Perhaps the most important point is that the tendency for women to leave science more than men do is so small as to be barely detectable.

Another conclusion is affected by the correlation between GRE quantitative scores and change of major for Black males (to be discussed later). In the total NSME population from which the sample was drawn, the correlation was very small and not significant ($r = -0.007$), but in the responding sample it was the highest correlate of change for Black males and was statistically significant ($r = -0.287$, $p < 0.01$). For no other subgroup of the sample was there any correlation between GRE scores and whether students remained in NSME or not. We do not know how to interpret this finding except for the fact that the sample was small (95 Black male respondents) and may or may not be typical of Black male students.

Relationships of Gender and Minority Status to Change of Field

The matrix of weighted correlations shows that in the survey sample, neither gender nor minority status was associated with the decision to switch from NSME to another field of study. (The gender indicator was coded 0=male and 1=female; race was coded 0=White and 1=minority; and change was coded 0=changed out of NSME and 1=did not change.)

	Gender	Race	Change
Gender	1.0000		
Race	.0671**	1.0000	
Change	.0277	-.0004	1.0000

** $p < .01$.

We can see some rather important results simply in the correlations among these indicators.

- The change indicator was uncorrelated with the gender indicator ($r = 0.028$, N.S.). In this sample, women did not switch out of NSME any more often than men did.

- The change indicator was uncorrelated with the race indicator (r = 0.000, N.S.). Minorities did not switch out of NSME more frequently than White test takers did, though we do not know from this analysis alone whether this conclusion applies to all minority NSME majors.

We also see that the race and gender indicators were significantly correlated with each other. This occurred because of the relatively high proportion of women in the Black sample. Among the Black NSME majors, women outnumbered men by nearly 20%; in the White sample, men outnumbered women two-to-one.

Creation of Questionnaire Scales

The questionnaire was designed with the intention of grouping items into scales to improve their reliabilities. We defined the scales to correspond to various dimensions of the undergraduate experience, self-evaluations on a variety of skills, and characteristics of the preferred job. An item was included on a scale on the basis of (1) what the item was designed to measure and (2) the correlation of the item with change of major. For example, the item "I have a lot in common with other students in my department" was designed as an indicator of the student's relationship with peers in his or her area of NSME. This item also correlated with change, that is, there was a significant difference in responses between those who planned to continue in NSME and those who planned to change. Appendix F contains the matrix of weighted correlations of all items as well as the correlation of each item with gender, race, and change of major.

The items that were most clearly associated with a scale and that correlated most highly with change were combined. Where appropriate, the direction of the scale of the item was reversed. On these bases, the following 13 scales were constructed.

SCALE DEFINITIONS

(Negative sign indicates item was scored in reverse)

Scale		Items
1	COURSE DIFFICULTY	A4, A6, A19, A26
2	COURSE ENJOYMENT	A1, - A5, A7, - A9, A18
3	QUALITY OF INSTRUCTION	A28, - A2, - A12, - A15
4	RELATIONSHIPS WITH INSTRUCTORS	A13, - A17, A21, - A24
5	RELATIONSHIPS WITH STUDENTS	A3, - A10, A11, - A20, A23, - A25, A27
6	PERCEIVE SELF AS SCIENTIST	A16, - A22
7	QUALITY OF DEPARTMENT	B1 TO B15, REVERSED
8	PROBLEM-SOLVING SKILLS	C1, C6, C7, C10, REVERSED
9	STUDY SKILLS	C3, C8, C9, C11, REVERSED
10	VERBAL SKILLS	C4, C5, REVERSED
11	INTERPERSONAL SKILLS	C12, C13, REVERSED
12	CAREER OPPORTUNITIES	IIIB1, IIIB4, IIIB8, IIIB11, IIIB12
13	WILL DO BUT DON'T LIKE	IIIB3, - IIIB5, IIIB6, - IIIB7, - IIIB9

Results of the Scale Analyses

Analyses of the Total Weighted[3] Sample. We computed a correlation matrix among the scale scores, GRE scores, selected GRE background questions, gender, White or minority status, and whether students remained in NSME or not. Appendix G contains that matrix for the total weighted sample and for each large race-by-gender group.

The table on page 17 shows, in rank order, the scales and other variables that correlated significantly with change of major. It is clear from the table that aside from scales 2 and 6, most scales show a very low correlation (< .10) with change. Nevertheless, we have reported the results because they are statistically significant and may contribute, at least to a small extent, to student decisions. Even though the scales consist of more than one item, the correlations may still be attenuated by considerable measurement error.

The variable that correlated most highly with change was Scale 2: Course Enjoyment. Those who enjoyed their coursework the least were the most likely to leave NSME. This result is consistent with the finding by Hilton et al. (1989) that a major variable distinguishing persisters from nonpersisters was that they found math, science, and engineering at the college level enjoyable and interesting.

The second most highly correlated scale was Scale 6: Perception of Self as a Scientist. Those who basically could not imagine themselves being a scientist or engineer or making a contribution in the sciences were likely to change majors.

The third most highly correlated was Scale 4: Relationships with Instructors. Nonchangers more often reported having professors who knew and cared about them and who encouraged them to continue in the field for graduate study.

The fourth was Scale 12: Career Opportunities. The students who planned to continue in NSME perceived greater numbers and varieties of jobs in their field, as well as opportunities for substantial income, advancement, and prestige.

Less highly correlated, but still statistically significant, was the relationship with self-reported GPA in major. Those planning to leave NSME, not surprisingly, tended to have lower grades in their major. What is surprising, however, is that this correlation held for the total sample and for White males but not for the other race-by-gender groups. For women and minorities, self-reported undergraduate grade average in major did not correlate significantly with the decision to change fields. Consistent with the finding for the total sample are the responses to the questionnaire scale on course difficulty and the responses to items requiring self-ratings of skills and abilities.

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[3] Recall that when the sample was selected, only one fifth of the White males and two fifths of the White females were sampled. In all analyses combining White students with minorities, therefore, data for these two groups were weighted by multiplying by the reciprocal of their sampling fractions.

Significant Correlates of Change for Total Weighted Sample[1]

(rank ordered, highest to lowest)

Variable	Description	Correlation	Example of scale item (direction of scoring in parentheses)
Scale 2	Course enjoyment	-0.23	I have enjoyed courses in my major better than in most other subjects. (+)
Scale 6	Self as scientist	-0.18	I have difficulty imagining myself as a scientist or engineer. (-)
Scale 4	Relationships to instructors	-0.08	My instructors have encouraged me to continue in this field. (+)
Scale 12	Career opportunities	-0.08	I expect this field to provide good opportunities for advancement. (+)
BQ-z	GPA in major	-0.06	
Scale 1	Course difficulty	0.06	Subjects in my major field have been more difficult than I expected. (+)
Scale 5	Relationships to peers	-0.05	I have a lot in common with other students in my department. (-)
Scale 7	Department quality	-0.05	Teaching methods, useful faculty criticism, opportunities to assist profs. (+)
BQ-cc	Hours community service	0.05	
BQ-u	Academic honor society	-0.04	
Scale 8	Problem solving skills	-0.04	Self-rating of math skills, test-taking skills, ability to think through problems. (+)
Scale 3	Quality of instruction	-0.04	Courses have sometimes been obstacles rather than vehicles for learning. (-)
BQ-hb	Hours worked	0.04	
Scale 10	Verbal skills	0.03	Self-rating of reading skills and writing skills. (+)

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[1] Variables that were not significantly correlated with change included gender, whether White or minority, parents' education, and GRE scores.

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Scale 1: Course Difficulty. Those who were planning to leave science and engineering more often reported that the courses in their major were both different and more difficult than expected. Changers also indicated more often than nonchangers that burnout was a problem for majors in their field.

Scale 5: Relationship with Peers. This scale also correlated significantly with change. Students who felt they had a lot in common with other students in their department were less likely to leave science and engineering. Similarly, those who perceived their peers as helpful and willing to share class notes tended to continue. Those leaving science/engineering more often indicated that people in their field have no real humanitarian concerns, and some acknowledged the statement that the competition in labs has been so fierce that some students have sabotaged the experiments of others.

Not surprisingly, students' ratings of departmental quality (Scale 7) were correlated positively with their decision to continue in NSME. Statistically significant in themselves were single-item ratings of the scholarly and professional competence of the faculty, teaching methods, opportunities for student evaluation of courses and instruction, opportunities to assist professors in their research, and useful faculty criticism of student work.

Positively correlated with students' leaving NSME was the number of hours spent in community service. This may be an important finding because involvement in community service may suggest a need to work with people in a way that cannot be met by doing science.

Less highly correlated, but still statistically significant, was the relationship of change with participation in an academic honor society. Not surprisingly, those in honor societies were more likely to continue in NSME.

Scale 8, Problem-Solving Skills, consisted of self-ratings of skills in mathematics, speed in solving problems, ability to think through problems, and test-taking skills. Students who rated themselves highly in these areas were more likely to continue in NSME.

Student evaluation of the quality of instruction (Scale 3) was also significantly correlated with decisions to continue in NSME. Those who indicated that courses were sometimes obstacles rather than vehicles for learning, that many labs were taught by teaching assistants who were unsure of themselves, and that many professors could not teach very well were more likely to change to another field for graduate work.

From the GRE background questionnaire we found a positive correlation between the number of hours that students worked during their most recent year of school and the decision to change fields. Unfortunately, we did not ask in the survey questionnaire whether they worked during college and, if so, whether it was in a science or engineering area. So it is not possible, from these data, to know whether a job in science discouraged students from continuing in science, whether the hours worked deprived students of time to study, whether working students were less academically able than nonworking students (and therefore had to work because they could not qualify for a scholarship), or some other reason. So without further information, the result is difficult to interpret.

Finally, a very small but significant correlation was obtained between the self-rating of verbal skills (Scale 10) -- consisting of reading skills and writing skills -- and the decision to change. Students with higher self-ratings of verbal skills were somewhat more likely to change fields, possibly believing they could better utilize those skills outside of science and engineering.

In addition to summarizing those variables and scales that correlated with change, it is important to emphasize those variables that did not correlate. Neither ethnicity, parents' education, nor gender correlated with change. Perhaps most surprising is that for the total sample (but not for all subgroups), GRE scores were uncorrelated with the decision to change.

Analysis of Scales for Minorities and Women. The sample sizes were smaller for minority students than for White students. We therefore combined the three Hispanic groups out of necessity, realizing that each of the analysis groups still comprises a heterogeneous population. We conducted the same correlational analyses on the following groups as we did on the total population: Black males, Black females, Hispanic males, Hispanic females, Asian American males, and Asian American females. There were not enough Native Americans to study alone, and we did not think it was appropriate to combine them with any other ethnic group.

Results of the analysis for Black respondents is shown on page 20. Unlike the findings for any other ethnic group, for Black male students the largest correlation with change was GRE quantitative scores. Second highest, and the only other significant correlation, was Scale 6, Ability to See Oneself as a Scientist.

These findings suggest that from all the data we gathered, Black male students who leave science and engineering generally have lower quantitative scores and cannot imagine themselves as scientists, as being able to make a real contribution in their field.

Black female respondents who planned to leave science and engineering had a profile more like the profile for the total sample surveyed. They primarily found that they did not like their courses. In addition, they could not imagine themselves being scientists and making a scientific contribution.

The analysis results for Hispanics included students who identified themselves as Mexican American, Puerto Rican, or Other Hispanic. The chart on page 21 summarizes the results of that analysis.

For Hispanic students, course enjoyment did not play as important a role in switching fields as it did for the total sample. For both males and females, inability to perceive themselves as scientists was the scale most highly related to the decision to change fields.

Second highest was career opportunities. Apparently for Hispanic students, both male and female, career opportunities are a very important reason for choosing a graduate field of study. Those who perceived science and engineering as providing those opportunities tended to plan to continue in those fields; those who perceived them as providing little opportunity chose to change fields.

Significant Correlates of Change for Black or African American Respondents

(rank ordered, highest to lowest)

BLACK MALE RESPONDENTS (N = 95)

Variable	Description	Correlation	Example of scale item (direction of scoring in parentheses)
GRE quant.		-0.29	
Scale 6	Self as scientist	-0.26	I have difficulty imagining myself as a scientist or engineer. (-)

BLACK FEMALE RESPONDENTS (N = 132)

Variable	Description	Correlation	Example of scale item (direction of scoring in parentheses)
Scale 2	Course enjoyment	-0.23	I have enjoyed courses in my major better than in most other subjects. (+)
Scale 6	Self as scientist	-0.20	I have difficulty imagining myself as a scientist or engineer. (-)

Significant Correlates of Change for Hispanic[1] Respondents

(rank ordered, highest to lowest)

HISPANIC MALE RESPONDENTS (N = 130)

Variable	Description	Correlation	Example of scale item (direction of scoring in parentheses)
Scale 6	Self as scientist	-0.31	I have difficulty imagining myself as a scientist or engineer. (-)
Scale 12	Career opportunities	-0.24	I expect this field to provide good opportunities for advancement. (+)
Scale 2	Course enjoyment	-0.21	I have enjoyed courses in my major better than in most other subjects. (+)

HISPANIC FEMALE RESPONDENTS (N = 109)

Variable	Description	Correlation	Example of scale item (direction of scoring in parentheses)
Scale 6	Self as scientist	-0.29	I have difficulty imagining myself as a scientist or engineer. (-)
Scale 12	Career opportunities	-0.26	I expect this field to provide good opportunities for advancement. (+)
BQ-bb	Hours worked	0.20	

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[1] Because of their small numbers, test takers who identified themselves as Mexican American or Chicano, Puerto Rican, or Other Hispanic or Latin American were grouped as "Hispanic."

For male Hispanic students, course enjoyment was the third most highly correlated scale. For female Hispanic students, the number of hours they worked during the most recent school year was important. Those who worked the most hours were most likely to leave NSME.

The last analyses were done on Asian American respondents. Results are shown on page 23. Course enjoyment ranked highly as a correlate of change for both male and female Asian American respondents. Of even higher ranking for females was perception of themselves as scientists. This was not even a significant correlate for males, whereas for females, the correlation was -0.43.

Asian American females also differed from the rest of the sample in another way. A high correlate of change was Scale 11, which we called Interpersonal Skills (r = -0.27). This scale consisted of two self-ratings: relationships with instructors and relationships with fellow students. Asian American females who chose to leave science and engineering rated themselves significantly lower on these items.

Asian American males also differed in one way from the rest of the survey sample. A significant correlate of change for them was the GRE background question, "Have you ever written a book or an article that appeared in a professional journal or other national publication?"

Those who reported having published were more likely to leave NSME. Similar to the finding in the total sample that self-reported verbal skills were correlated with leaving science, Asian American males in our sample may have expressed their verbal skills by writing for publication.

Correlational Analyses of Individual Questionnaire Items and Indicators

Even though single items generally have low reliability, we found that the responses to many items in our survey were significantly different for people leaving NSME than for people continuing in these fields. For this reason, we will discuss these items.

The correlation matrix in Appendix F is a concise way to represent relationships, and it was computed primarily for use in scale construction. But it is not very useful for the interpretation of responses. We therefore computed mean responses and t-tests for each item to compare those who remained in NSME with those who changed. This section discusses the items showing significant differences in the responses of changers and nonchangers. The reader may find it useful to have the survey questionnaire (Appendix C) at hand while following these analyses.

UNDERGRADUATE STUDIES: Part A, page 1. In this section of the questionnaire, students evaluated their undergraduate experiences. The items covered six a priori dimensions: course enjoyment, course difficulty, quality of instruction, relationships with instructors, relationships with other students, and their perception of themselves as scientists. Respondents indicated, on a 5-point Likert scale, the extent to which they agreed with each statement. The analysis compared mean scores of changers versus nonchangers.

Significant Correlates of Change for Asian American Respondents

(rank ordered, highest to lowest)

ASIAN AMERICAN MALE RESPONDENTS (N = 151)

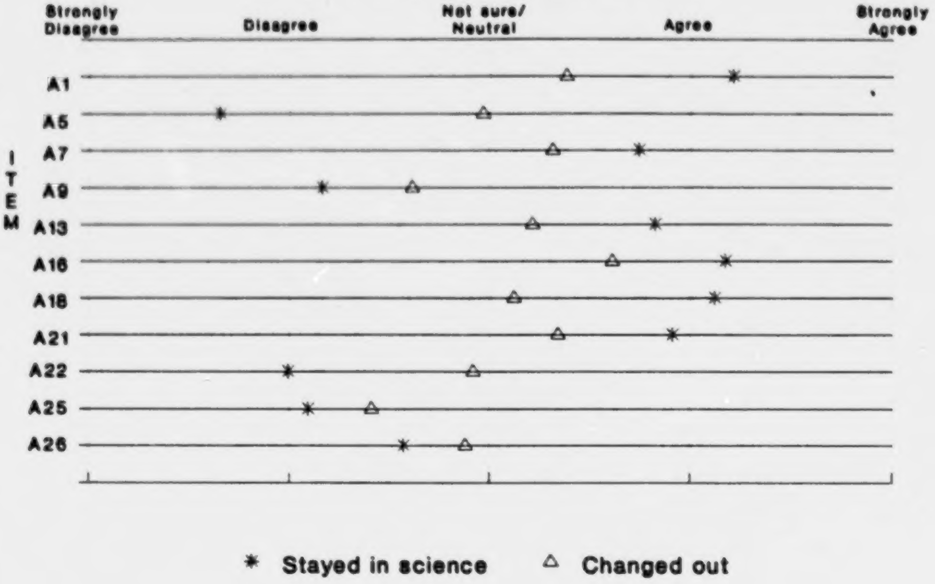
Variable	Description	Correlation	Example of scale item (direction of scoring in parentheses)
Scale 2	Course enjoyment	-0.27	I have enjoyed courses in my major better than in most other subjects. (+)
BQ-t	Written book/article	0.16	

ASIAN AMERICAN FEMALE RESPONDENTS (N = 83)

Variable	Description	Correlation	Example of scale item (direction of scoring in parentheses)
Scale 6	Self as scientist	-0.43	I have difficulty imagining myself as a scientist or engineer. (-)
Scale 2	Course enjoyment	-0.36	I have enjoyed courses in my major better than in most other subjects. (+)
Scale 11	Interpersonal skills	-0.27	Relationships with instructors. Relationships with fellow students. (+)

Of the 28 items in Part A, 11 revealed mean responses that were significantly different for changers and nonchangers at the 0.001 level. To compare their mean responses to each of these 11 items, refer to the chart below. Each item is labeled on the left, A1 through A26. To the right of each item label is shown the mean response of those who stayed in science (asterisk) and of those who changed out of science (triangle). At the top of the chart are the response labels, from "strongly disagree" to "strongly agree." Item A1, the wording of which is shown below the chart, obtained a mean score above "agree" by those who stayed in science, whereas those who left science scored between "neutral" and "agree."

Mean Responses to Selected Items in Undergraduate Studies, Part A

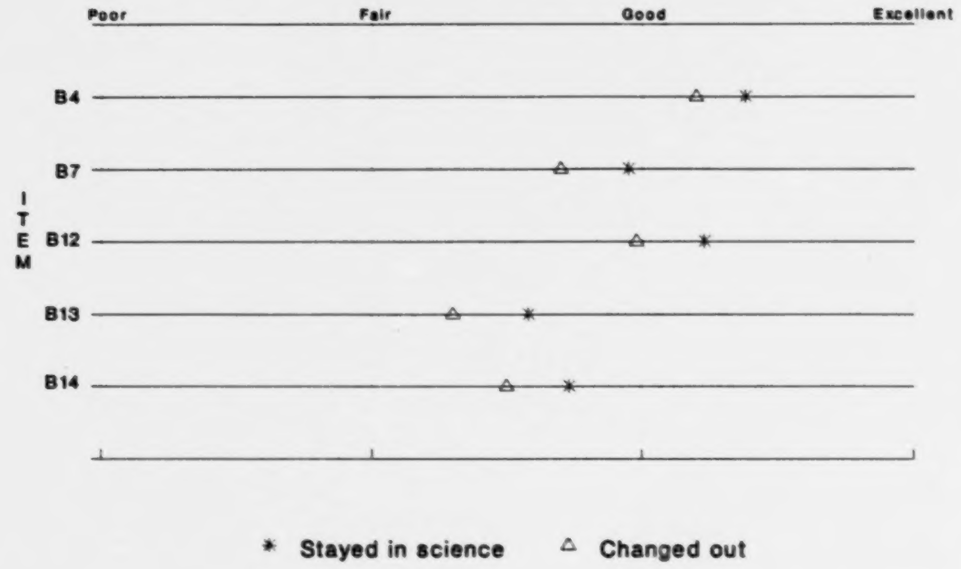


Items were worded as follows:

A1: I have enjoyed courses in my major better than most other subjects.
A5: Course work in my major has convinced me not to do graduate work in that field.
A7: I have enjoyed laboratory work.
A9: I enjoyed science more in high school than I have in college.
A13: One or more professors have encouraged me to do graduate work in this field.
A16: I feel I could make a real contribution in this field.
A18: If I were starting over again, I would major in this same field.
A21: My instructors have encouraged me to continue in this field.
A22: I have difficulty imagining myself as a scientist or an engineer.
A25: Most people in this field have no real humanitarian concerns.
A26: Courses in my major have turned out to be very different from what I expected.

***UNDERGRADUATE STUDIES:* Part B, page 2.** Part B asked students to rate 15 different aspects of their undergraduate departments or programs. Of those 15 aspects, 5 significantly ($p < 0.01$) differentiated the changers from the nonchangers. These items all seemed to involve perceived faculty competence, especially as it relates to teaching ability. Students who remained in science or engineering perceived their faculty as extremely competent, they gave good ratings on teaching methods, and from good to excellent ratings on opportunities for student evaluation of courses and instruction. They also reported a greater opportunity to assist professors in their research and found good faculty criticism of their work. The following chart, like the previous one, compares the mean responses on each of these five items in Part B.

Mean Responses to Selected Items in Undergraduate Studies, Part B



Items were worded as follows:

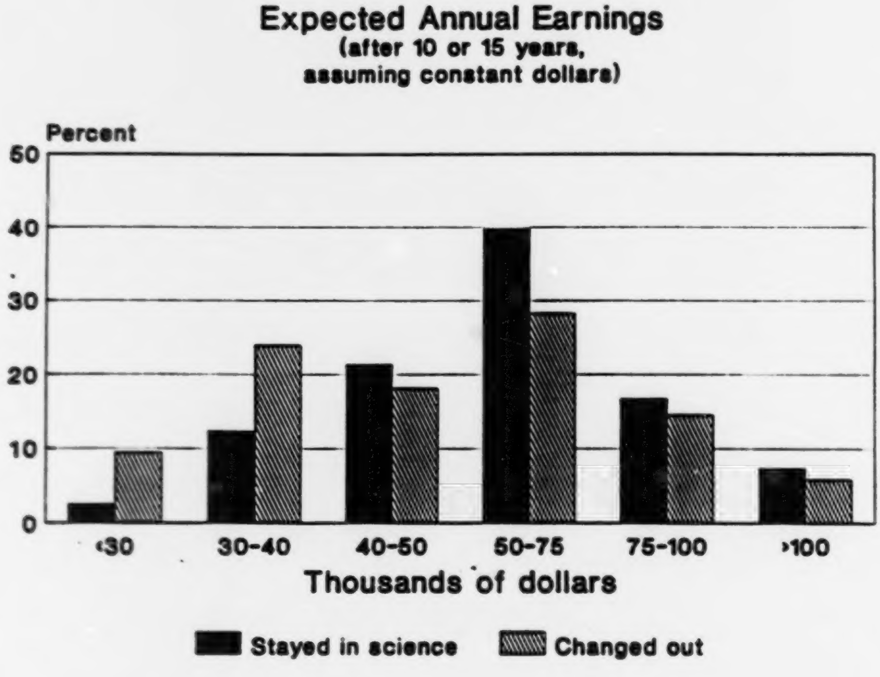
B4: Scholarly and professional competence of the faculty
B7: Teaching methods (e.g., lectures, seminars, audio/video aids)
B12: Opportunities for student evaluation of courses and instruction
B13: Opportunities to assist professors in their research
B14: Useful faculty criticism of your work

UNDERGRADUATE STUDIES, Part C, page 2. In this section respondents rated their own abilities compared with those of other students majoring in the same field.

Of the 13 items in Part C, only two significantly ($p < 0.05$) differentiated changers and nonchangers. These were the second and fifth items: laboratory skills and writing skills. Those who changed out of NSME, although they perceived their laboratory skills as above average, rated their laboratory skills significantly lower than did those who planned to continue in NSME. On the other hand, those changing rated their writing skills higher than did those who planned to continue in NSME. This is perhaps an important finding because it suggests that students with superior writing skills may perceive that their skills will be better utilized outside of science.

CAREER PLANS AND EXPECTATIONS: Part A, page 3. This question asked respondents to assume that the current value of the dollar does not change and to estimate how much they expect to earn annually in 10 or 15 years. Some very important information was revealed by this item.

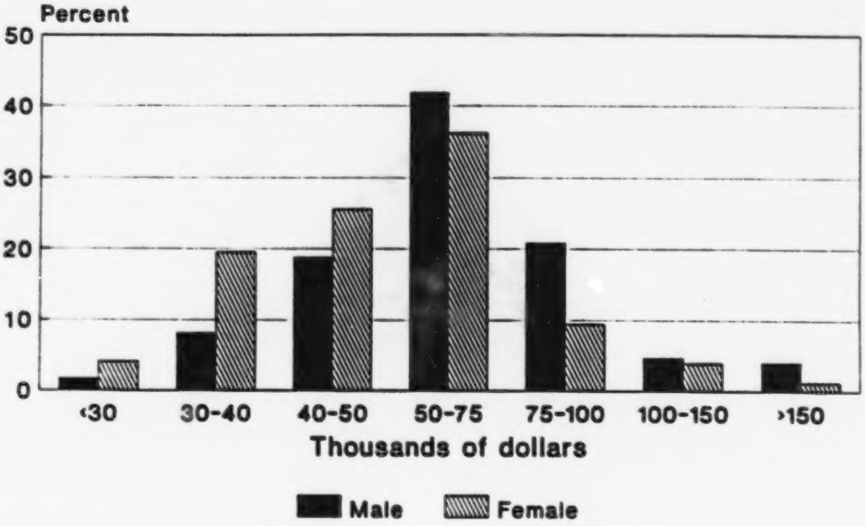
The graph below shows the distribution of estimated earnings for those planning to stay in NSME (solid bar) and those planning to leave (striped bar).



Although the median expectation for both groups was in the $50,000 to $75,000 range, the greater proportion of students expecting to earn less than $40,000 were those leaving NSME. Students remaining in NSME had a slight edge over the changers in the upper income expectation categories. One might conclude that student were not leaving science and engineering for more money elsewhere. Though these data tend to support this hypothesis, this study alone is not conclusive.

There were not enough students leaving NSME to break down the analysis further, within that group. But the number of nonchangers was sufficiently large to examine gender and ethnic differences. To see if there were gender differences in earning expectations among students continuing in NSME, we computed the same distribution for males and females. The following chart shows quite clearly that women had lower earning expectations.

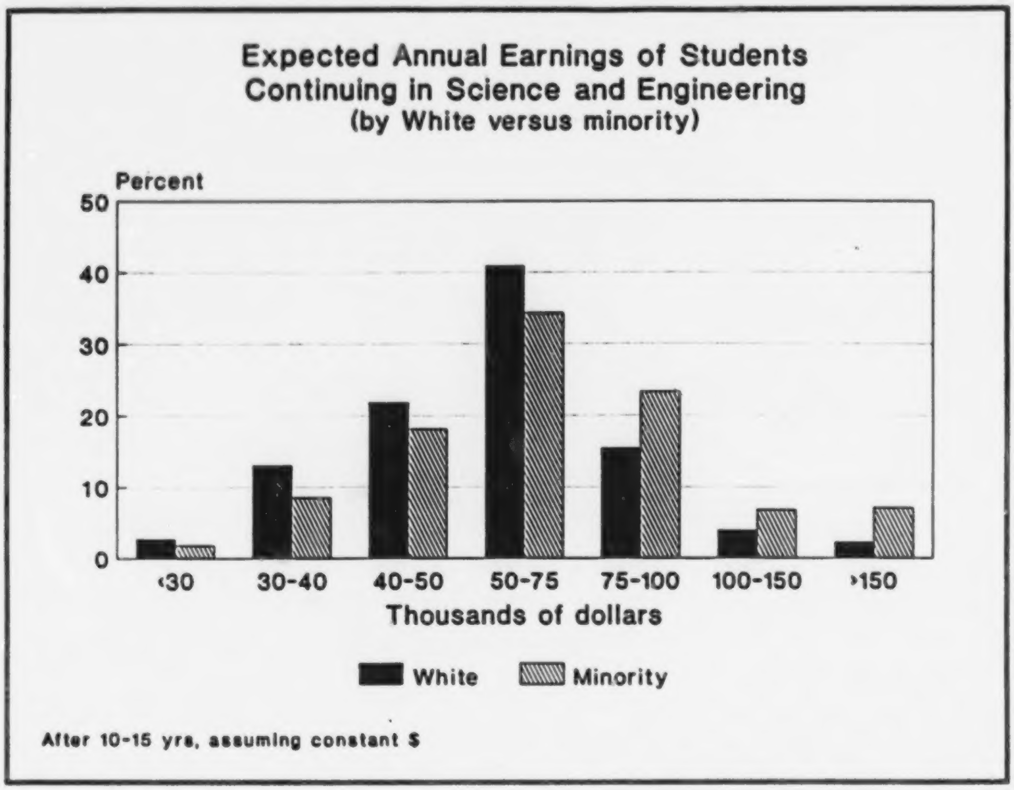
Expected Annual Earnings of Students
Continuing in Science and Engineering
(by gender)



After 10-15 yrs, assuming constant $

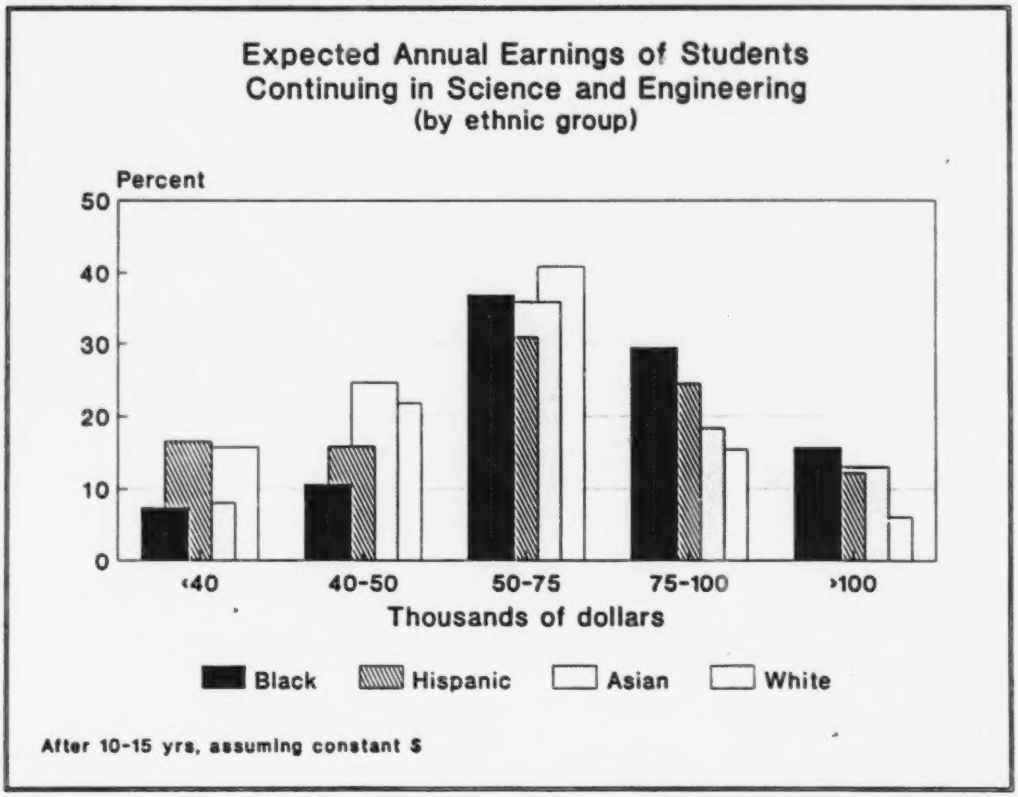
The median expected income for both genders is in the $50,000 to $75,000 range, but a disproportionately high number of women had salary expectations in the lower ranges. More than 20% of the men and less than 10% of the women in NSME expected to earn between $75,000 and $100,000.

The two charts on the next page show the distribution of expected annual earnings for White versus minority respondents (top chart) and for all four major ethnic groups (Hispanics were combined because of their small numbers).



Expected Annual Earnings of Students Continuing in Science and Engineering (by White versus minority)

After 10-15 yrs, assuming constant $



Expected Annual Earnings of Students Continuing in Science and Engineering (by ethnic group)

After 10-15 yrs, assuming constant $

The top chart shows quite clearly that White NSME students had considerably lower income expectations than did minority students. We therefore generated the second chart to display the salary expectations of four ethnic groups, to see if Hispanic and Asian American students also had high income expectations. (To make the chart easier to read, note that the solid black bar refers to Black students, the White bar refers to White students, and the two different shaded bars represent Asian American and Hispanic students.)

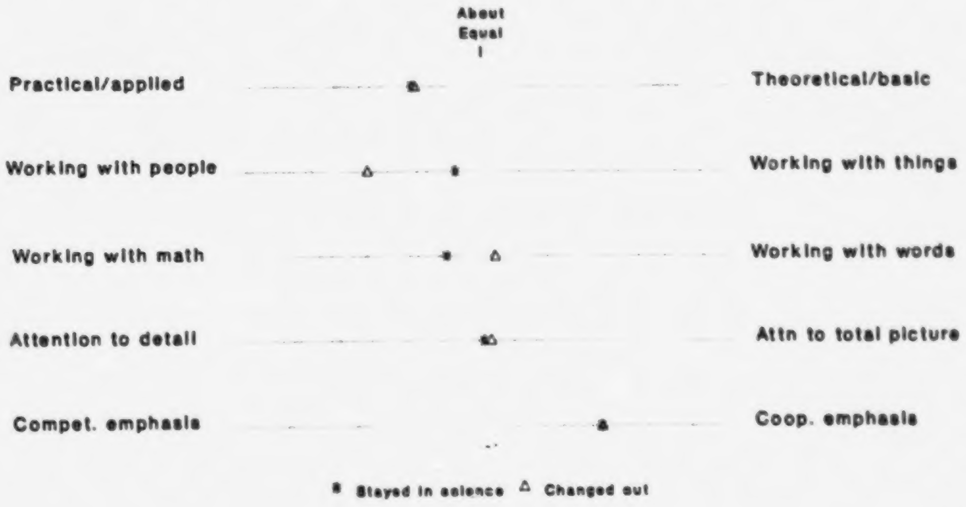
We see that the highest salary expectations were among Black students, and the lowest were among White students. The difference in expectations of White and Black students, so far as we can determine, may indicate unrealistic salary expectations on the part of Black students. Fechter (1989) cites 1985 statistics from the National Research Council indicating that there was virtually no difference in the median salaries of Black and White Ph.D.s in science and engineering having less than 10 years of experience.

CAREER PLANS AND EXPECTATIONS, Part B, page 3. This question asked respondents to rate the characteristics of the job they would most like to have on five bipolar scales. Changers and nonchangers differed significantly in the expected direction on two of these scales: "working with people" versus "working with things," and "working with math" versus "working with words."

Even those planning to remain in NSME, however, indicated a very slight preference for working with people rather than things. Those leaving NSME showed a stronger preference for working with people.

Respondents remaining in NSME showed a slight preference, on the average, for working with math, and those leaving showed a slight preference for working with words.

The following chart shows the mean responses on all five scales for each group.



It is not surprising that changers and nonchangers differed on the dimensions of math versus words and people versus things, but it is noteworthy that they did not differ at all on the other three scales. Their mean ratings were virtually identical.

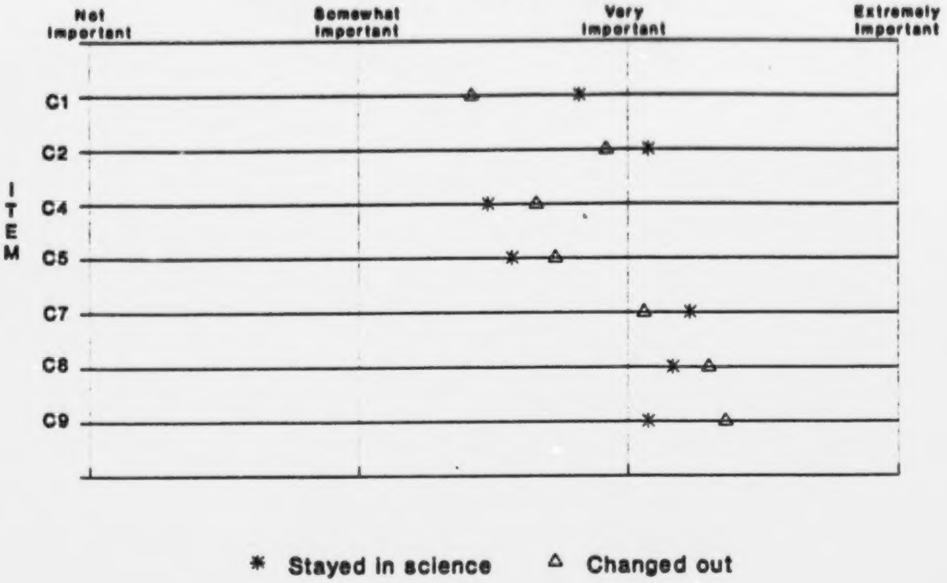
CAREER PLANS AND EXPECTATIONS, Part C, page 3. Question C asked, "How important to you is each of the following job characteristics or opportunities?"

Of the nine characteristics listed, changers and nonchangers obtained significantly different mean responses on seven.

Students who were continuing in NSME rated the importance of technical challenge, opportunity for advancement, and job security more highly than did changers. Physically attractive environment, flexible work schedule, variety, and contribution to society were rated more highly by those leaving NSME than by those remaining. These may be summarized as follows:

Those remaining in natural science/math/engineering	Those leaving natural science/math/engineering
Technical challenge	Physically attractive environment
Opportunities for advancement	Flexible work schedule
Job security	Variety
	Contribution to society

The chart on page 31 shows, more specifically, the average responses of changers and nonchangers on these seven scales.



Mean Responses to Selected Items in Career Plans and Expectations, Part C

Characteristics were worded as follows:

C1: Technical challenge
C2: Opportunities for advancement
C4: Physically attractive environment
C5: Flexible work schedule
C7: Job security
C8: Variety
C9: Contribution to society

CAREER PLANS AND EXPECTATIONS: Part D, page 4. In the last section of CAREER PLANS AND EXPECTATIONS, respondents were asked, "To what extent do you want a job that involves each of the following activities?" For each activity, they responded either "not at all," "possibly," or "definitely." We scored the responses from 1 to 3 and computed a mean for each group. The following table shows the means for each group.

Mean Scores on Extent to Which Students Want
a Job Entailing Various Activities

Activity	*Mean for Students Remaining in NSME*	*Mean for Students Leaving NSME*	*Sig. (p)*
Teach, train or instruct	2.26	2.50	<.001
Write, prepare reports or articles	2.13	2.19	.260
Analyze numerical data	2.11	1.95	.011
Operate instruments or equipment	2.30	1.81	<.001
Interpret and evaluate information	2.59	2.49	.022
Concentrate on details	2.27	2.09	.001
Advise, counsel, interview	2.08	2.51	<.001
Explain, answer questions	2.40	2.66	<.001
Reason mathematically	2.22	2.11	.092
Design instruments or equipment	1.89	1.54	<.001
Keep records, catalog information	1.69	1.72	.602
Think quickly	2.26	2.37	.030
Persuade, negotiate, sell	1.51	1.75	.001
Make presentations	2.11	2.26	.004
Chart or diagram data	2.06	1.95	.048
Draw or draft	1.73	1.67	.329
Work with computers	2.46	2.32	.016
Trouble-shoot problems	2.35	2.14	<.001
Supervise or direct others	2.31	2.39	.133
Read extensively	2.00	2.09	.126
Gather data	2.21	2.08	.014
Develop ideas	2.70	2.71	.784

The activity most preferred by both groups was "develop ideas." Also important for both groups was "interpret and evaluate information."

The least preferred activity for both groups was "persuade, negotiate or sell," though there were a number of close seconds for the least preferred activities: "keep records, catalog information," "draw or draft," and "design instruments or equipment."

Although some preferences were shared by both groups, most activities were preferred more by one group than the other. In the entire list of 22 activities, the average response of changers was significantly different from the average response of nonchangers for 15 activities:

Those remaining in NSME want this activity more	*Those leaving NSME want this activity more*
Analyze numerical data	Advise, counsel, interview
Operate instruments or equipment	Explain, answer questions
Interpret and evaluate information	Think quickly
Concentrate on details	Persuade, negotiate, sell
Design instruments or equipment	Make presentations
Chart or diagram data	
Work with computers	
Trouble shoot problems	
Gather data	

These differences in activity preferences are not entirely surprising, but it is perhaps worth noting the items for which there was no significant difference in the responses of the two groups:

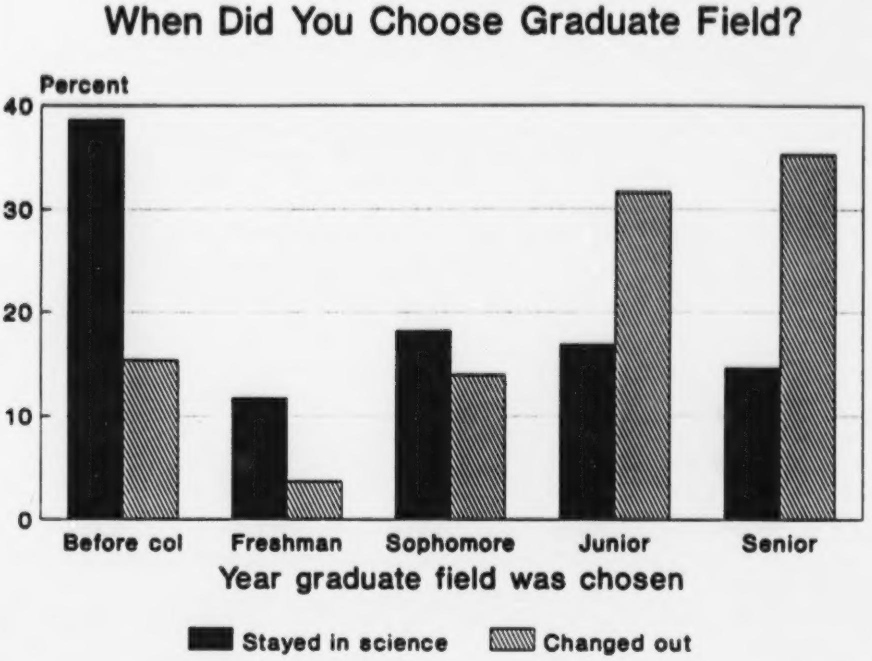
Write, prepare reports or articles
Reason mathematically
Keep records, catalog information
Draw or draft
Supervise or direct others
Read extensively
Develop ideas

PLANS FOR GRADUATE STUDY, Part A, page 5. The first question asked for the intended field of graduate study and then asked, "Approximately when did you choose this field?"

We found a sharp, but not surprising, contrast between changers and nonchangers in the answer to this question. The chart on page 34 shows those differences.

Thirty-nine percent of students planning to continue their education in science or engineering claimed to have made that decision before college. At the other extreme, 35% of those changing fields claimed to have made the decision during their current, senior year. Furthermore, if the self-reports are correct, we can conclude that two thirds (67%) of the changers made the decision to change during the last two years of college.

If we look at the other years -- freshman and sophomore -- we see smaller numbers having made a decision either way. During the freshman year, only 11% of the entire sample made any decision about graduate work. Very few -- less than 4% -- of the changers decided to change that early. That is not surprising; we would expect students disliking science in their freshman year to change majors as undergraduates, not to wait until graduate school to change. By the sophomore year, we see the number of changers increasing as well as the number of people making commitments to the sciences at that time. Then by the junior year, a large number of NSME majors are considering a different field for graduate study. This pattern continues into the senior year, when some students may reason, "I've stuck it out this far; I may as well get my science degree. But I'll do graduate work in something else."

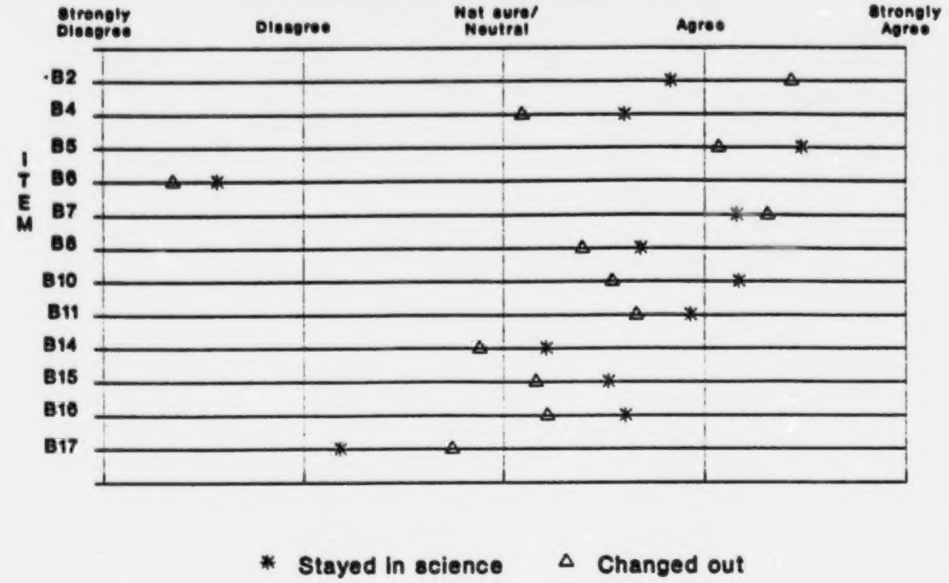


Based on total sample, weighted data.

PLANS FOR GRADUATE STUDY: Part B, page 5. The second part of the section on plans for graduate study requested that respondents indicate how strongly they agreed or disagreed with each of 17 statements about their intended graduate field of study. Changers scored significantly differently from nonchangers on 12 of the statements.

The following chart shows the mean rating on each statement for changers and nonchangers.

Mean Responses to Selected Items in Plans for Graduate Study, Part B



The statements were worded as follows:

B2: Success in this field will require good interpersonal skills.
B4: This field provides many opportunities for a substantial income.
B5: There are exciting new developments in this field.
B6: I am under pressure from my family to do graduate work in this field.
B7: In this field I will have an opportunity to make a significant contribution.
B8: This is a prestigious field.
B10: Success in this field will require good technical skills.
B11: I expect this field to provide good opportunities for advancement.
B14: I have already invested time and effort into this field and I feel I must continue.
B15: I have had work experience in this field.
B16: I had one or more professors who strongly encouraged me to do graduate work in this field.
B17: I expect my graduate courses to be less demanding than the undergraduate courses in my major.

Family Background and Encouragement

The last set of items in the questionnaire asked about parents' occupations, and about the approval and encouragement the respondent may have received from family and professors. To interpret these analyses it is important to realize that some cell frequencies were quite small. With only 650 minority respondents, approximately 6% of whom omitted the questions on parents, and only 4% of whom planned to leave NSME, it is impossible to report separate statistics on minorities who changed fields. We will therefore report only minority statistics that apply to all minorities in the sample or all respondents within a specific ethnic group.

Half (50.4%) of all respondents reported having fathers in technical, mechanical, or scientific occupations, and this figure was nearly the same whether respondents planned to continue in NSME or to change fields. It was also the same for males and females. There was, however, a significant difference between White and minority respondents: 52% of White and only 43% of minority students had fathers in technical occupations. The percentage was especially low for Black and Mexican American students (32%), and especially high for Asian American students (55%).

The question on mother's occupation proved to be of far greater interest than the question on father's occupation. In the total sample, 22% of the females and only 12% of the males had mothers in a technical, mechanical or scientific occupation. Among students planning to leave NSME, however, there was no significant gender difference in mother's occupation. Furthermore, females leaving NSME were just as likely to have mothers in technical occupations as were females continuing in NSME.

More minority than White respondents reported having mothers in technical occupations (20% versus 15%). Only 9% of the Mexican American students, however, had mothers in technical occupations compared with 28% of Asian Americans.

Although we might infer that mother's occupation played a role in the student's selection of an undergraduate major, especially for females and minorities, there was no significant difference between mother's occupation and the decision to leave NSME.

For the most part, students perceived their parents as approving of both their undergraduate and graduate fields of study. There were, however, some small but statistically significant differences.

More males than females reported that their mothers approved of their undergraduate major (98.2% versus 96.2%). More White than minority students indicated mothers' approval (98.0% versus 94.5%). The highest level of approval was expressed by White students, and the lowest was expressed by Asian Americans. Mother's approval of undergraduate major was unrelated, however, with whether students changed fields for graduate school.

Father's approval was also expressed more strongly by males than by females. Males earned almost complete approval (98.1%) by their fathers in their choice of an undergraduate NSME major; slightly, but significantly, fewer females indicated that their fathers approved (95.7%). White students also indicated more paternal approval than did minority students

(97.7% versus 94.7%). There was no significant difference in father's approval between changers and nonchangers.

The next question was whether their mothers approved of their chosen graduate fields of study. Again male students and White students felt that they received more approval. Among those who switched out of NSME, however, there was no gender difference in mother's approval. Furthermore, there was no relationship between mother's approval of the graduate field of study and the decision to change fields.

Father's approval of the graduate field of study followed exactly the same pattern as mother's approval as it related to gender differences and White/minority differences. However, father's approval did relate in a small but statistically significant way to change in major. Among those students who continued in NSME, 98.1% perceived their fathers as approving. Among those who changed, the figure was 94.7%.

In addition to questions about parental approval, we included an item on encouragement by one or more professors. In the total sample, 80% indicated that one or more professors had encouraged them to do graduate work in their chosen fields, which may or may not have been NSME. There was no significant gender difference, but there was a significant difference between White and minority responses. Only 74% of the minority students reported receiving encouragement from a professor.

Whether or not students changed fields was significantly related to encouragement from a professor. Of those who continued in science, 80% were encouraged to do so. Of those who changed, 69% were encouraged to do graduate work in their new fields.

Students were also asked whether they knew personally one or more professionals in the field in which they planned graduate work. In the entire sample, 81% reported that they did. There were no significant differences in this response between genders or White/minority identity. Furthermore, there were no differences between changers and nonchangers. This item was intended to identify possible relationships with role models. Either the item failed in its intent or role models seemed to exist for about 80% of the sample, regardless of gender or race. Possibly, by the time NSME students consider graduate school, role models are no longer an issue.

The last item asked about work experience in the intended area of graduate work. Two thirds of the sample had worked in the field, and there were no gender or ethnic differences. There was, however, a difference in the number of changers and nonchangers who reported work experience. Only 52% of those leaving NSME had worked in their newly chosen field, but 67% of those continuing in NSME had work experience in their fields.

Responses to Open-ended Questions

At the end of the questionnaire we asked two open-ended questions:

> "What was the single most important factor in your selection of a graduate field of study?"

> "If your graduate field of study will be markedly different from your undergraduate major field, discuss the various considerations that led you to change fields. If your graduate and undergraduate fields are about the same, discuss the factors that led to your decision to continue in the same field."

Most of the responses to these questions were simply "I like it," or some variation on liking the field. Only a few people wrote anything more concrete.

One woman earning her bachelor's degree in mathematics and planning graduate work in education wrote that her husband was the single most important factor in her selection of a graduate field. She wrote, "I am teaching and wanted to get my master's for job security [respondent's emphasis], so I chose something interesting to me because I coach. Also math graduate work would be too hard and time consuming with small children at home."

Another respondent planned graduate work in mathematics because "mathematics is challenging and will provide for a flexible work schedule. Hopefully I will be able to get into some applications. Mathematics is also a pursuit of fundamentals. Graduate school will give me the training I need."

Two respondents attributed their graduate field choice to specific undergraduate courses.

One wrote that the single most important factor in his selection of a graduate field was The Jobs Rated Almanac. He also wrote, "In my senior year I was able to take four courses in statistics, my intended graduate field of study. . . I enjoyed these courses more than the previous courses in my major, and I enjoyed my greatest success in these courses."

The other wrote, "Enjoyed undergraduate course in reaction engineering -- good professor -- lots of encouragement."

We also had a respondent who apparently reacted strongly to negative role models. Basically this person planned to become a college professor after having several courses with professors that were totally unsatisfactory.

Finally, one irate respondent wrote, "I have become frustrated with the immaturity and personal narrowness of many of the people in my field. My field is no less free from politics and pettiness than any other, regardless of lofty pretentions. With little prospect of fiscal reward, it has become unattractive. I no longer plan to attend graduate school in the near future; however, with time my feelings may mature and soften."

DISCUSSION

Research Implications

Probably the most intuitively obvious reason most people would give for majoring in a field is its intrinsic interest. This intuition has been confirmed by this study as well as in many student interviews, such as the focus groups that preceded this survey, and in the study of persistence in science by high-ability minority undergraduate students conducted recently by Hilton et al. (1989).

But we do have to ask what happens to students who choose to major in science, math, or engineering, apparently because they like it, and then switch to another field, presumably because their feelings changed. The results of our study (based on student responses and item correlations), when viewed as a narrative rather than a statistical summary, seem to suggest a process that diverts students from their choice of science, math, or engineering as a career. The following narrative is based on the correlations we have reported.

At some point during their undergraduate years, NSME students begin to form identities as scientists or engineers. Some, however, cannot imagine themselves assuming that role or ever being able to make scientific contributions. They feel they have little in common with the other students in their department. They have higher verbal skills than their peers, they enjoy writing, and they may even have published in scholarly journals. Whereas, their peers would rather work with numbers and "gadgets," they prefer to interact with people. Some believe that scientists and engineers are solitary individuals, with little variety in their work, who make a questionable contribution to society. Many of these students are quite outgoing; some are involved in community service.

For some students, coursework is not what they expected; it may be less interesting than it was in high school. For some, courses are too difficult, and homework demands so much time that they experience burnout. Their grades may not be as high as they are in other subjects, and instructors do not encourage them to continue in their field. To some students it seems the fault of the department. According to these students, the instructors cannot teach well and they provide no useful feedback on assignments. Some students even think their instructors are incompetent. Even so, these students decide to finish their bachelor's degree in science, but they plan to pursue graduate work in different fields.

In the study of high-ability minority students by Hilton et al. (1989), there were also numerous questions about values, aspirations, and long-term occupational expectations. Some of the reasons that these students gave for leaving science were that they were more interested in nonscience subjects, the courses differed from their expectations, they received poor grades in their majors, and they were discouraged by instructors. Our survey confirmed these reasons for leaving science in quite a different sample and with a somewhat different methodology.

All our conclusions should be reconfirmed by replication of this study, or a similar study, on a different sample. Some results are particularly important to pursue, such as the correlation for Asian American females between the decision to leave science and poor relationships with peers and instructors. Our sample of Asian American female students was quite small -- just 83 cases -- and we are reluctant to generalize from this sample.

Another relationship to investigate further is the negative correlation for Black students between GRE quantitative scores and the decision to leave NSME. The working file had shown no significant correlation, but the responding sample showed a correlation of -0.29. We have reason to believe, therefore, that the relationship was an effect of nonresponse bias. It is difficult to imagine how this relationship would hold only for those responding to the survey.

The questionnaire survey data base that we assembled and analyzed will be retained for further analysis by us and by other researchers. Although we found no relationship between gender or ethnicity and whether or not a student left NSME, we did find gender and race differences in responses. Because those differences were unrelated to change of major, we did not discuss them in this report. We did find statistically significant differences between males and females, for example, in preferred job characteristics and activities. Women more often wanted jobs where they could advise, counsel, or interview, whereas men more often wanted to write papers, analyze data, and develop ideas. It was more important to women and minorities to make a contribution to society and to have a flexible work schedule. Job security, prestige, and respect were important to more women and minorities than to White males.

Further analysis of these questions might help us to create profiles of some unique needs that particular minority groups or women in science might have. Science and engineering departments as well as the professions themselves might better be able to attract women and minorities if they had a clearer picture of the needs and preferences of technically able people who are different in some important respects from the White male population that has traditionally filled the ranks in mathematics, natural sciences, and engineering.

Program and Policy Implications

Colleges and universities that may be concerned about the loss of high-quality science and engineering students to other fields may wish to assess their own programs and policies with respect to student-faculty interaction, grading practices, instructional quality, and other factors that affect student decisions. Many departments may not believe that they are losing quality students. Departments often work under the assumption that poor students will be weeded out by a sort of natural selection process. The data from this study seem to suggest that in the weeding process, departments may also be uprooting some of the science students who are flourishing.

Some evidence from this study suggests that students who are highly motivated to make a contribution to society, to work with people (as opposed to things), to work in an attractive environment, and to have variety in their jobs are more likely to leave the sciences. Seeing this result, we must ask ourselves what kind of image science has in the eyes of the public -- even in the eyes of students earning a bachelor's degree in the sciences. Most scientific and engineering occupations require teamwork and often involve negotiations with clients as well as interactions with other inventors and investigators. The stereotypic scientist hidden away in a dismal laboratory, having few social or humanitarian concerns, is hardly an appropriate image for today's scientist. Perhaps we can offer students more information on the options open to them as scientists -- information depicting scientists in settings as varied as they truly are, from laboratories to offices to classrooms to the many varieties of field work, writing, travel, conventions, and meetings with clients.

Consistent with the negative stereotypic image of a scientist or engineer are the differences we observed in the responses of males and females, and of White and minority students. Making a contribution to society, for example, is important to more female and minority students than to White or male students. Perhaps we can attract more women and minorities to the sciences if we convey science as a socially beneficial endeavor. Similarly, accurate information about the salaries of scientists and engineers is apparently not reaching many undergraduate science majors. The relatively high expectations of many Black students may be unrealistic, and such expectations may result in disappointment when those students finally achieve their educational goals and enter the job market.

Our survey results suggest that undergraduate science and engineering majors who are applying to graduate school still do not have a realistic view of the work options that will be available to them when (or if) they finish their education. They need to have a broader picture of the many varieties of work and work environments that will be open to them, and more accurate information about salaries. Perhaps more able students of both genders and all races would choose to continue in science if they knew more about its possibilities.

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Appendix A

GRE Background Questionnaire

GENERAL DIRECTIONS:
This form will be machine processed and may be returned to you if it is not completed properly or if the correct fee is not enclosed. For your information to be recorded accurately, please **use a No. 2 soft-lead pencil** (not ink) to print information in the boxes. **Completely fill in the ovals** corresponding to the letters and numbers you printed. **Check the accuracy of the ovals** you filled in, and **erase any errors completely.** Be sure to **complete page 4.** To avoid delay, do not enclose a letter.

1. IMPORTANT: I AM USING THIS FORM TO REGISTER FOR (fill in all that apply)

Please read the registration instructions in the **Bulletin** before completing all four pages of this form

- ○ GRE test(s)
- ○ Graduate Student Locater Service
- ○ Minority Graduate Student Locater Service

LOCATER SERVICE: The registration deadline for the **last** 1990-91 search is May 7, 1991.

2. NAME **Omit spaces, apostrophes, and Jr., II, etc.**

Last Name (Family or Surname) - first 15 letters | First Name (Given) - first 12 letters | MI

3. TEST DATE

Fill in only one oval.

- 1 ○ Oct. 13, 1990*
- 2 ○ Dec. 8, 1990
- 3 ○ Feb. 2, 1991
- 4 ○ Apr. 13, 1991*
- 5 ○ June 1, 1991 (General Test Only)

***General Test is not available in New York or other states with test disclosure laws.**

4. DATE OF BIRTH

○ Jan. ○ Feb. ○ Mar. ○ Apr. ○ May ○ June ○ July ○ Aug. ○ Sept. ○ Oct. ○ Nov. ○ Dec.

Day | Year

5. U.S. SOCIAL SECURITY NUMBER

See the **Bulletin.**

6. TEST CENTER

Enter at least one test center code and fill in the corresponding ovals

FIRST CHOICE | SECOND CHOICE

PLEASE PRINT
FIRST CHOICE – Name, City, State or Province, Country

SECOND CHOICE – Name, City, State or Province, Country

7. TEST(S) TO BE TAKEN

○ **I am registering for the GENERAL TEST.**

General Test is not available in October or April in New York or in other states with test disclosure laws

I am registering for one SUBJECT TEST as marked below. (Indicate which test by filling in the appropriate oval. These are not major field codes; fill in an oval below only if you are registering for a Subject Test.) No Subject Tests are given in June

- *B22 ○ - Biochemistry, Cell and Molecular Biology
- B24 ○ - Biology
- C27 ○ - Chemistry
- C29 ○ - Computer Science
- E31 ○ - Economics
- E34 ○ - Education
- E37 ○ - Engineering
- G47 ○ - Geology
- H57 ○ - History
- L64 ○ - Literature in English
- M67 ○ - Mathematics
- **M72 ○ - Revised Music
- P77 ○ - Physics
- P79 ○ - Political Science
- P81 ○ - Psychology
- S87 ○ - Sociology

*B22 offered Oct. & Dec. only
**M72 offered Oct. & April only

8. SEX

- 1 ○ Male
- 2 ○ Female

9. SEATING

Would you prefer left-handed seating if available?

- ○ YES
- ○ NO

10. CURRENT EDUCATIONAL STATUS

- 2 ○ Sophomore (second year)
- 3 ○ Junior (third year)
- 4 ○ Senior (fourth or final year)
- 5 ○ First-Year Graduate Student
- 6 ○ Second-Year Graduate Student
- 7 ○ Unenrolled (College Graduate)
- 8 ○ Unenrolled (Master's Degree)
- 9 ○ Other

11. UNDERGRADUATE INSTITUTION

Using the Institution Code List in the Bulletin, enter the code for your current or most recent undergraduate institution.

GRE REGISTRANTS:

IF YOU WANT YOUR GRE SCORES SENT TO THE *GRADUATE* SCHOOL AT THIS INSTITUTION, ENTER THE CODE AGAIN IN ITEM 12

R | INSTITUTION | DEPT.

Complete only if registering for the tests. If you do not indicate otherwise, both General and Subject Test scores will be sent to this institution.

- 1 ○ Both General and Subject scores
- 2 ○ General scores only
- 3 ○ Subject scores only
- 4 ○ No scores

PAGE 1

GRE®

12. SCORE REPORT RECIPIENTS

(Refer to registration instructions in the **Bulletin**). Both General and Subject Test scores will be sent if you do not indicate otherwise

1 R | INSTITUTION | DEPT.

SEND THE FOLLOWING SCORES FROM MY CUMULATIVE GRE RECORD

- 1 ○ Both General and Subject scores
- 2 ○ General scores only
- 3 ○ Subject scores only

2 R | INSTITUTION | DEPT.

SEND THE FOLLOWING SCORES FROM MY CUMULATIVE GRE RECORD

- 1 ○ Both General and Subject scores
- 2 ○ General scores only
- 3 ○ Subject scores only

3 R | INSTITUTION | DEPT.

SEND THE FOLLOWING SCORES FROM MY CUMULATIVE GRE RECORD

- 1 ○ Both General and Subject scores
- 2 ○ General scores only
- 3 ○ Subject scores only

4 R | INSTITUTION | DEPT.

SEND THE FOLLOWING SCORES FROM MY CUMULATIVE GRE RECORD

- 1 ○ Both General and Subject scores
- 2 ○ General scores only
- 3 ○ Subject scores only

GRADUATE RECORD EXAMINATIONS
GRADUATE STUDENT LOCATER SERVICE
MINORITY GRADUATE STUDENT LOCATER SERVICE

REGISTRATION FORM OCT. 1, 1990 - SEPT. 30, 1991
INTERNATIONAL ADMINISTRATIONS

BEST COPY AVAILABLE

13. BACKGROUND INFORMATION

If you are registering for a Locater Service, it is to your benefit to respond to these questions.

a. What is your current citizenship status?

1 ○ United States citizen
2 ○ Resident alien ("permanent resident") in the United States
3 ○ Neither a United States citizen nor a resident alien

b. Find your country code from the list in the Bulletin and enter it in the boxes and fill in the corresponding ovals. Enter 000 if you are a U.S. citizen.

☐	0	1	2	3	4	5	6	7	8	9
☐	0	1	2	3	4	5	6	7	8	9
☐	0	1	2	3	4	5	6	7	8	9

c. In the State and Territories Code List in the Bulletin, find the code number for the state or U.S. Territory you consider your permanent residence.

(U.S. citizens and "permanent residents" only)

☐	0	1	2	3	4	5	6	7	8	9
☐	0	1	2	3	4	5	6	7	8	9

d. How do you describe yourself? Fill in only one oval. (U.S. citizens only)

1 ○ Native American or Alaskan Native
2 ○ Black or African American
3 ○ Mexican American or Chicano
4 ○ Asian or Pacific American
5 ○ Puerto Rican
6 ○ Other Hispanic or Latin American
7 ○ White (non-Hispanic)
8 ○ Other

e. Please indicate any permanently disabling conditions you have. (Fill in only one oval.)

1 ○ None
2 ○ Blindness or other visual impairment
3 ○ Deafness or other hearing impairment
4 ○ Physical handicap
5 ○ Learning disability
6 ○ Multiple handicaps
7 ○ Other

f. What is (are) your reason(s) for taking the GRE Test(s)? (Select all that apply.)

	General Test	Subject Test
1 Admission to graduate school	○	○
2 A fellowship/scholarship application requirement	○	○
3 An undergraduate program exit requirement	○	○
4 An external degree program	○	○
5 Practice	○	○
6 A graduate department requirement	○	○
7 Other	○	○

g. Do you plan to attend (or if enrolled, are you attending) graduate school full time or part time?

1 ○ Full time
2 ○ Part time
3 ○ Undecided

h. What is the highest educational level you will have attained by the date of the test or Locater Service Search for which you are registering?

1 ○ Still an undergraduate
2 ○ Earned bachelor's degree
3 ○ Graduate credit not toward a degree
4 ○ Graduate credit toward a master's degree
5 ○ Earned master's degree
6 ○ Graduate credit toward a doctoral degree
7 ○ Earned doctorate

i. In what calendar year did you receive or do you expect to receive your bachelor's degree? (Fill in completely the ovals that correspond to the last two digits of the year.)

1		●								
9										●
☐	0	1	2	3	4	5	6	7	8	9
☐	0	1	2	3	4	5	6	7	8	9

j. Referring to the Major Field Code List, find your undergraduate major field of study.

☐	0	1	2	3	4	5	6	7	8	9
☐	0	1	2	3	4	5	6	7	8	9
☐	0	1	2	3	4	5	6	7	8	9
☐	0	1	2	3	4	5	6	7	8	9

k. What is your eventual graduate degree objective?

1 ○ Nondegree graduate study
2 ○ Master's (M.A., M.S., M.Ed.)
3 ○ Intermediate (such as Specialist)
4 ○ Doctorate (Ph.D., Ed.D.)
5 ○ Postdoctoral study
6 ○ Not currently planning graduate study

l. Referring to the Major Field Code List, find the field in which you plan to do your graduate work. If you are undecided, use: 0000.

☐	0	1	2	3	4	5	6	7	8	9
☐	0	1	2	3	4	5	6	7	8	9
☐	0	1	2	3	4	5	6	7	8	9
☐	0	1	2	3	4	5	6	7	8	9

m. What is or was your overall undergraduate grade point average?

1 ○ D or lower
2 ○ C-
3 ○ C
4 ○ B-
5 ○ B
6 ○ A-
7 ○ A

n. Indicate how many courses you have taken as an undergraduate in each of the following subject areas, including courses being taken currently. (Use the course definition at your undergraduate institution.)

Subject Area	Number of Courses Taken				
A. SCIENCE	None	1-2	3-6	7-9	10+
1 Architecture	○	○	○	○	○
2 Biological Sciences	○	○	○	○	○
3 Chemistry	○	○	○	○	○
4 Computer Science	○	○	○	○	○
5 Engineering	○	○	○	○	○
6 Geology	○	○	○	○	○
7 Mathematics	○	○	○	○	○
8 Physics	○	○	○	○	○
9 Statistics	○	○	○	○	○
10 Other Science	○	○	○	○	○
B. BUSINESS AND COMMERCE					
1 Accounting	○	○	○	○	○
2 Management	○	○	○	○	○
3 Marketing	○	○	○	○	○
4 Other Business and Commerce	○	○	○	○	○
C. HUMANITIES					
1 English	○	○	○	○	○
2 Fine Arts	○	○	○	○	○
3 Foreign Language	○	○	○	○	○
4 Philosophy	○	○	○	○	○
5 Other Humanities	○	○	○	○	○
D. SOCIAL SCIENCE					
1 Anthropology	○	○	○	○	○
2 Economics	○	○	○	○	○
3 Education	○	○	○	○	○
4 History	○	○	○	○	○
5 Political Science	○	○	○	○	○
6 Psychology	○	○	○	○	○
7 Sociology	○	○	○	○	○
8 Other Social Science	○	○	○	○	○
E. OTHER					
Other Subject Areas	○	○	○	○	○

o. Do you communicate better (or as well) in English than in any other language?

○ Yes ○ No

p. Have you applied for a National Fellowship?

○ Yes ○ No

q. What is your native (or best) language of communication? Use the list in the Bulletin. The languages are arranged in alphabetical order for your convenience. If your native language is English use code 422. If you do not find your native (or best) language listed, use code 000.

☐	0	1	2	3	4	5	6	7	8	9
☐	0	1	2	3	4	5	6	7	8	9
☐	0	1	2	3	4	5	6	7	8	9

r. Indicate the highest level of education completed by your father or male guardian and your mother or female guardian. (Select only one in each column.)

	Father	Mother
1. Grade school or less	○	○
2. Some high school	○	○
3. High school diploma or equivalent	○	○
4. Business or trade school	○	○
5. Some college	○	○
6. Associate degree	○	○
7. Bachelor's degree	○	○
8. Some graduate or professional school	○	○
9. Graduate or professional degree	○	○

s. As of the GRE test or Locater Service Search date for which you are registering, how many years of full-time work experience and/or active military service will you have had?

1 ○ None
2 ○ Summer(s)
3 ○ Less than one year
4 ○ One year or more but less than three years
5 ○ More than three years but less than five years
6 ○ More than five years but less than seven years
7 ○ More than seven years

t. Have you ever written a book or an article that appeared in a professional journal or other national publication?

○ Yes ○ No

u. Have you been elected to membership in any national academic honor society (e.g., Phi Beta Kappa, Sigma Xi)?

○ Yes ○ No

v. Have you applied or do you plan to apply for financial aid at any graduate school?

○ Yes ○ No ○ Not sure

w. Is your enrollment or continuing attendance in graduate school dependent upon your receiving financial aid?

○ Yes ○ No ○ Not sure

x. Indicate how you prepared or are preparing for the GRE test(s). (Select all that apply.)

	General Test	Subject Test
1 By studying the sample questions in the **GRE Information Bulletin** and/or GRE Subject Test Descriptive Booklet(s)	○	○
2 By working through an actual GRE test published by ETS	○	○
3 By using a book on how to prepare for the GRE Test(s) not published by ETS	○	○
4 By attending a test preparation or coaching course	○	○
5 By using GRE test preparation software published by ETS	○	○
6 By using GRE test preparation software not published by ETS	○	○
7 Self study	○	○
8 Other preparation	○	○
9 No preparation	○	○

y. Is there any one geographic region in which you would prefer to attend graduate school? (Select only one.)

1 ○ New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont)
2 ○ Mid Atlantic (Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania)
3 ○ South (Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia)
4 ○ Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin)
5 ○ Southwest (Arizona, Arkansas, New Mexico, Oklahoma, Texas)
6 ○ West (Alaska, California, Colorado, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming)
7 ○ Any region would be acceptable

z. **In courses in your undergraduate major field only**, what grade average have you received so far? (If your college does not use letter grades, please mark the letter grade that is the closest equivalent to your grade average.)

1 ○ D or lower
2 ○ C-
3 ○ C
4 ○ B-
5 ○ B
6 ○ A-
7 ○ A

DO NOT WRITE IN THIS AREA. FOR ETS USE ONLY.

FOR ETS USE ONLY

aa. Considering **only your last two college years**, approximately what overall grade average have you received? (If your college does not use letter grades, please mark the letter grade that is the closest equivalent to your grade average.)

1 ○ D or lower
2 ○ C-
3 ○ C
4 ○ B-
5 ○ B
6 ○ A-
7 ○ A

bb. About how many hours per week did you spend working for wages during your most recent school year?

1 ○ 0
2 ○ 1 – 5
3 ○ 6 – 10
4 ○ 11 – 20
5 ○ More than 20

cc. About how many hours per week did you spend in community service activities during your most recent school year?

1 ○ 0
2 ○ 1 – 5
3 ○ 6 – 10
4 ○ 11 – 20
5 ○ More than 20

dd. In which of the following areas have you received your most important honor, award, prize, or other recognition? (Select one only.)

1 ○ Student government or organization
2 ○ Professional - an award or prize for field work or publication of a scholarly article or book
3 ○ Community service - election or appointment to a community service unit, activity, or group
4 ○ Literary - editing the college paper, yearbook, or literary magazine or having a poem, story, or article published in a public paper or magazine
5 ○ Artistic - a high rating in a music contest, a part in a play, opera, or show, or an award in an art competition
6 ○ Scientific - an award or recognition in a science competition
7 ○ Athletic - a letter in athletics
8 ○ None of the above categories

ee. If you took the Test of English as a Foreign Language (TOEFL), what was your Total Score?

15. REMITTANCE

ENTER DOLLARS AND FILL IN OVALS FOR TOTAL AMOUNT ENCLOSED

(If less than $100, fill in leading 0) – DO NOT SEND CASH OR FOREIGN CURRENCY. ETS cannot be held responsible for loss of cash payments. Refer to the Registration Instructions for acceptable methods of payment.

Make remittance payable to Graduate Record Examinations.

DOLLARS

14. TESTS, PUBLICATIONS, and FEES

Fill in the ovals and dollar amounts for all items that apply.

TEST FEES		AMOUNT
○ General Test	$35	$ ______
○ Subject Test	$35	$ ______
○ Test center surcharge for testing in India, Japan, Korea, and Taiwan	Add $20	$ ______
○ Test center surcharge for testing in other locations outside of the U.S., Puerto Rico, and U.S. Territories	Add $15	$ ______
○ Late Registration (U.S. and P.R. only)	Add $15	$ ______
○ Standby Registration	Add $30	$ ______

Test Disclosure Service →

Available for the General Test administered on December 8 & 10, 1990, February 2 & 4, 1991 and June 1, 1991. See the **Bulletin.** (U.S. postage included)

○ Test Disclosure Service	$11	$ ______

PUBLICATIONS

Fill in the oval and dollar amount for each publication ordered.
(U.S. postage included)

If you do not fill in the oval for the publication you are ordering, it will not be shipped and any fee submitted will be refunded.

Practicing to Take the GRE Tests.		
○ General Test -- No.8	$12	$ ______
○ General Test -- No.7	$10	$ ______
○ Biology -- 2nd Edition	$11	$ ______
○ Chemistry -- 2nd Edition	$11	$ ______
○ Computer Science -- No. 1	$ 9	$ ______
○ Economics -- No. 1	$ 9	$ ______
○ Education -- 2nd Edition	$11	$ ______
○ Engineering -- 2nd Edition	$11	$ ______
○ Geology -- No. 1	$ 9	$ ______
○ History -- No. 1	$ 9	$ ______
○ Literature in English -- 2nd Edition	$11	$ ______
○ Mathematics -- No. 1	$ 9	$ ______
○ Music -- Revised	$ 9	$ ______
○ Physics --No. 1	$ 9	$ ______
○ Political Science -- No. 1	$ 9	$ ______
○ Psychology -- 2nd Edition	$11	$ ______
○ Sociology -- No.1	$ 9	$ ______

Software (Includes Practicing to Take the GRE General Test -- No. 7) $70 each
(U.S. postage included)

○ IBM Edition	$70	$ ______
○ Macintosh Edition	$70	$ ______

Directory of Graduate Programs: 1990 & 1991

$14 each (U.S. postage included)

○ Volume A: Agriculture, Biological Sciences, Psychology, Health Sciences, and Home Economics	$14	$ ______
○ Volume B: Arts and Humanities	$14	$ ______
○ Volume C: Physical Sciences, Mathematics, and Engineering	$14	$ ______
○ Volume D: Social Sciences and Education	$14	$ ______

POSTAGE AND HANDLING FOR PUBLICATIONS

Postage and handling for addresses in North America, U.S. Territories and APO addresses is included in the price of publications.

Postage and handling for all other addresses:		
○ First book	$ 4	$ ______
○ ______ (number) additional books x	$ 2	$ ______
○ Software (each set)	$10	$ ______

Fill in TOTAL DOLLAR amounts in both places for accurate processing. →

ENTER TOTAL REMITTANCE ENCLOSED $ ______

DEPARTMENT CODE LIST FOR ITEMS 11 AND 12 ON THE REGISTRATION FORM AND MAJOR FIELD CODE LIST FOR ITEMS 13-j AND 13-l ON THE REGISTRATION FORM

NATURAL SCIENCES

Agriculture

0101	Agricultural Economics
0102	Agricultural Production
0103	Agricultural Sciences
0104	Agronomy
0105	Animal Sciences
0106	Fishery Sciences
0107	Food Sciences
0108	Forestry and Related Sciences
0109	Horticulture
0111	Parks and Recreation Management
0112	Plant Sciences (Except Agronomy, see 0104)
0113	Renewable Natural Resources
0110	Resource Management
0114	Soil Sciences
0115	Wildlife Management
0199	Agriculture — Other

Biological Sciences

0201	Anatomy
0221	Bacteriology
0202	Biochemistry
0203	Biology
0204	Biometry
0222	Biophysics
0205	Botany
0206	Cell and Molecular Biology
0207	Ecology
0208	Embryology
0209	Entomology and Parasitology
0210	Genetics
0211	Marine Biology
0212	Microbiology
0213	Neurosciences
0214	Nutrition
0215	Pathology
0216	Pharmacology
0217	Physiology
0218	Radiobiology
0219	Toxicology
0220	Zoology
0299	Biological Sciences — Other

Chemistry

0302	Analytical Chemistry
0301	Chemistry, General
0303	Inorganic Chemistry
0304	Organic Chemistry
0305	Pharmaceutical Chemistry
0306	Physical Chemistry
0399	Chemistry — Other

Computer and Information Sciences

0401	Computer Programming
0402	Computer Sciences
0403	Data Processing
0404	Information Sciences
0405	Microcomputer Applications
0406	Systems Analysis
0499	Computer Sciences — Other

Earth, Atmospheric, and Marine Sciences

0501	Atmospheric Sciences
0502	Environmental Sciences
0503	Geochemistry
0504	Geology
0505	Geophysics and Seismology
0507	Meteorology
0508	Oceanography
0506	Paleontology
0599	Earth, Atmospheric, and Marine Sciences — Other

Health and Medical Sciences

0601	Allied Health
0602	Audiology
0603	Chiropractic
0604	Dental Sciences
0605	Environmental Health
0606	Epidemiology
0607	Health Science Administration
0608	Immunology
0609	Medical Sciences
0621	Medicinal Chemistry
0610	Nursing
0618	Occupational Therapy
0611	Optometry
0612	Osteopathic Medicine
0613	Pharmaceutical Sciences
0619	Physical Therapy
0614	Podiatry
0615	Pre-Medicine
0616	Public Health
0620	Speech/Language Pathology
0617	Veterinary Medicine
0622	Veterinary Science
0699	Health and Medical Sciences — Other

Mathematical Sciences

0701	Actuarial Sciences
0702	Applied Mathematics
0703	Mathematics
0704	Probability & Statistics
0799	Mathematical Sciences — Other

Physics and Astronomy

0801	Astronomy
0802	Astrophysics
0803	Atomic/Molecular Physics
0804	Nuclear Physics
0805	Optics
0808	Physics
0806	Planetary Science
0807	Solid State Physics
0899	Physics and Astronomy — Other

Natural Sciences — Other

0999	Natural Sciences — Other

ENGINEERING

Engineering — Chemical

1001	Chemical Engineering
1002	Pulp and Paper Production
1003	Wood Science
1099	Chemical Engineering — Other

Engineering — Civil

1101	Architectural Engineering
1102	Civil Engineering
1103	Environmental/Sanitary Engineering
1199	Civil Engineering — Other

Engineering — Electrical and Electronics

1202	Communications Engineering
1201	Computer Engineering
1203	Electrical Engineering
1204	Electronics Engineering
1299	Electrical & Electronics Engineering — Other

Engineering — Industrial

1301	Industrial Engineering
1302	Operations Research
1399	Industrial Engineering — Other

Engineering — Materials

1401	Ceramic Engineering
1402	Materials Engineering
1403	Materials Science
1404	Metallurgical Engineering
1499	Materials Engineering — Other

Engineering — Mechanical

1501	Engineering Mechanics
1502	Mechanical Engineering
1599	Mechanical Engineering — Other

Engineering — Other

1601	Aerospace Engineering
1602	Agricultural Engineering
1603	Biomedical Engineering
1604	Engineering Physics
1605	Engineering Science
1606	Geological Engineering
1607	Mining Engineering
1608	Naval Architecture and Marine Engineering
1609	Nuclear Engineering
1610	Ocean Engineering
1611	Petroleum Engineering
1612	Systems Engineering
1613	Textile Engineering
1699	Engineering — Other

SOCIAL SCIENCES

Anthropology & Archaeology

1701	Anthropology
1702	Archaeology

Economics

1802	Econometrics
1801	Economics

Political Science

1901	International Relations
1902	Political Science and Government
1903	Public Policy Studies
1999	Political Science — Other

Psychology

2001	Clinical Psychology
2002	Cognitive Psychology
2003	Community Psychology
2004	Comparative Psychology
2005	Counseling Psychology
2006	Developmental Psychology
2007	Experimental Psychology
2008	Industrial and Organizational Psychology
2009	Personality Psychology
2010	Physiological Psychology
2011	Psycholinguistics
2016	Psychology
2012	Psychometrics
2013	Psychopharmacology
2014	Quantitative Psychology
2015	Social Psychology
2099	Psychology — Other

Sociology

2101	Demography
2102	Sociology

Social Sciences — Other

2206	American Studies
2201	Area Studies
2202	Criminal Justice/Criminology
2203	Geography
2207	Gerontology
2204	Public Affairs
2205	Urban Studies
2299	Social Sciences — Other

HUMANITIES AND ARTS

Arts — History, Theory, and Criticism

2301	Art History and Criticism
2302	Music History, Musicology, and Theory
2399	Arts — History, Theory, and Criticism — Other

Arts — Performance and Studio

2401	Art
2402	Dance
2405	Design
2403	Drama/Theatre Arts
2406	Fine Arts
2404	Music
2499	Arts — Performance and Studio — Other

English Language and Literature

2502	American Language and Literature
2503	Creative Writing
2501	English Language and Literature
2599	English Language and Literature — Other

Foreign Languages and Literatures

2601	Asian Languages
2609	Classical Languages
2602	Foreign Literature
2603	French
2604	Germanic Languages
2605	Italian
2606	Russian
2607	Semitic Languages
2608	Spanish
2699	Foreign Languages — Other

History

2701	American History
2702	European History
2703	History of Science
2799	History — Other

Philosophy

2801	All Philosophy Fields

Humanities and Arts — Other

2901	Classics
2902	Comparative Language and Literature
2903	Linguistics
2904	Religious Studies
2999	Humanities and Arts — Other

EDUCATION

Education — Administration

3001	Educational Administration
3002	Educational Supervision

Education — Curriculum and Instruction

3101	Curriculum and Instruction

Education — Early Childhood

3201	Early Childhood Education

Education — Elementary

3301	Elementary Education
3302	Elementary Level Teaching Fields

Education — Evaluation and Research

3403	Educational Psychology
3401	Educational Statistics and Research
3402	Educational Testing, Evaluation, and Measurement
3404	Elementary and Secondary Research
3405	Higher Education Research
3406	School Psychology

Education — Higher

3501	Educational Policy
3502	Higher Education

Education — Secondary

3601	Secondary Education
3602	Secondary Level Teaching Fields

Education — Special

3701	Education of Gifted Students
3702	Education of Handicapped Students
3703	Education of Students with Specific Learning Disabilities
3704	Remedial Education
3705	Special Education
3799	Special Education — Other

Education — Student Counseling and Personnel Services

3801	Personnel Services
3802	Student Counseling

Education — Other

3901	Adult and Continuing Education
3908	Agricultural Education
3902	Bilingual/Crosscultural Education
3903	Educational Media
3904	Junior High/Middle School Education
3909	Physical Education
3905	Pre-Elementary Education
3906	Social Foundations
3907	Teaching English as a Second Language/Foreign Language
3910	Vocational/Technical Education
3999	Education — Other

BUSINESS

Accounting

4001	Accounting
4002	Taxation

Banking and Finance

4101	Commercial Banking
4102	Finance
4103	Investments and Securities

Business Administration and Management

4201	Business Administration and Management
4202	Human Resource Development
4203	Institutional Management
4204	Labor/Industrial Relations
4205	Management Science
4206	Organizational Behavior
4207	Personnel Management
4299	Business Management — Other

Business — Other

4301	Business Economics
4302	International Business Management
4303	Management Information Systems
4304	Marketing and Distribution
4305	Marketing Management and Research
4399	Business —Other

OTHER FIELDS

Architecture and Environmental Design

4401	Architecture
4402	City and Regional Planning
4403	Environmental Design
4404	Interior Design
4405	Landscape Architecture
4406	Urban Design
4499	Architecture and Environmental Design — Other

Communications

4501	Advertising
4502	Communications Research
4503	Journalism and Mass Communications
4504	Public Relations
4505	Radio, TV, and Film
4506	Speech Communication
4599	Communications — Other

Home Economics

4601	Consumer Economics
4603	Family Counseling
4602	Family Relations
4699	Home Economics — Other

Library and Archival Sciences

4702	Archival Science
4701	Library Science

Public Administration

4801	Public Administration

Religion and Theology

4903	Ordained Ministry/Rabbinate
4901	Religion
4902	Theology

Social Work

5001	Social Work

Other Fields

5101	Interdisciplinary Programs
5102	Law
5199	Any Department Not Listed

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Appendix B

Codes Defining Science/Engineering Areas

The mathematics, natural sciences, and engineering codes used in this study were based on the department code list in the GRE background questionnaire (last page of Appendix A). Undergraduates specifying the following major field codes were selected for this study:

0201 - 0299	Biological sciences
0301 - 0399	Physical sciences
0801 - 0899	Physical sciences
0401 - 0499	Computer sciences
0501 - 0599	Earth sciences
0701 - 0799	Mathematical sciences
1001 - 1699	Engineering

Appendix C

Survey of Science, Mathematics, and Engineering Majors

EDUCATIONAL TESTING SERVICE PRINCETON, N.J. 08541

609-921-9000
609-734-1090 (Fax)
CABLE-EDUCTESTSVC
•
DIVISION OF APPLIED
MEASUREMENT RESEARCH

January 1991

Dear GRE Test Taker:

Recently, several federal agencies and national panels have predicted a shortage of graduate-level talent in some fields of science and engineering. In light of this concern, the Graduate Record Examinations (GRE) Board is currently sponsoring a study to determine more about the bases on which undergraduate science and engineering majors decide upon a graduate field of study.

We are writing to you because, when you registered to take the GRE recently, you indicated that you are currently a science or engineering major. This questionnaire asks about your undergraduate experiences, your thoughts about a career, and your plans for graduate school. Completing the questionnaire will probably take about 15 minutes. We hope that the time you devote to filling out the questionnaire will also benefit you by helping you clarify your own thoughts and feelings about your future.

All of your responses will be kept confidential. The statistical findings from this research will be published by the GRE Board, and we expect the educational and scientific community to be greatly interested in the information that you and your fellow students can provide.

If you have any questions about the project, feel free to call me at 609-734-5548.

Thank you for your participation.

Sincerely,

Jerilee Grandy

Jerilee Grandy
Project Director

SURVEY OF SCIENCE, MATHEMATICS, AND ENGINEERING MAJORS

UNDERGRADUATE STUDIES

A. The following statements, both positive and negative, are often made by students describing their undergraduate experiences. Please read each statement carefully regarding the field or department in which you are majoring, and indicate how much you agree or disagree by circling the appropriate number.

	STRONGLY AGREE	AGREE	NOT SURE/ NEUTRAL	DISAGREE	STRONGLY DISAGREE
I have enjoyed courses in my major better than most other subjects	1	2	3	4	5
Many labs have been taught by teaching assistants who were unsure of themselves	1	2	3	4	5
Students have generally been helpful to one another	1	2	3	4	5
Homework has taken too much time	1	2	3	4	5
Course work in my major has convinced me not to do graduate work in that field	1	2	3	4	5
Subjects in my major field have been more difficult than I expected	1	2	3	4	5
I have enjoyed laboratory work	1	2	3	4	5
Career opportunities in this field are very limited	1	2	3	4	5
I enjoyed science more in high school than I have in college	1	2	3	4	5
The atmosphere among students in my department has been competitive	1	2	3	4	5
I have a lot in common with other students in my department	1	2	3	4	5
Courses have sometimes been obstacles rather than vehicles for learning	1	2	3	4	5
One or more professors have encouraged me to do graduate work in this field	1	2	3	4	5
I enjoyed math more in high school than in college	1	2	3	4	5
Many of my professors could not teach very well	1	2	3	4	5
I feel I could make a real contribution in this field	1	2	3	4	5
Many professors in my department do not know me	1	2	3	4	5
If I were starting over again, I would major in this same field	1	2	3	4	5
Burnout is a real problem for majors in my field	1	2	3	4	5
The competition in labs has been so fierce that some students have sabotaged the experiments of others	1	2	3	4	5
My instructors have encouraged me to continue in this field	1	2	3	4	5
I have difficulty imagining myself as a scientist or an engineer	1	2	3	4	5
I have high regard for the other students in my department	1	2	3	4	5
Most of my professors have little interest in students	1	2	3	4	5
Most people in this field have no real humanitarian concerns	1	2	3	4	5
Courses in my major have turned out to be very different from what I expected	1	2	3	4	5
If I missed a lecture, I could always get notes from someone else	1	2	3	4	5
All important courses have been taught by knowledgeable faculty	1	2	3	4	5

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B. Please rate each of the following aspects of the department or program in which you have majored.

	EXCELLENT	GOOD	FAIR	POOR
Intellectual environment	1	2	3	4
Curricular and career advising	1	2	3	4
Laboratory facilities..	1	2	3	4
Scholarly and professional competence of the faculty	1	2	3	4
Academic ability and preparation of students majoring in this department	1	2	3	4
Appropriateness of procedures (grades, papers,exams) used to evaluate students .	1	2	3	4
Teaching methods (eg. lectures, seminars, audio/video aids).....................	1	2	3	4
Accessibility of faculty members to undergraduates	1	2	3	4
Variety of advanced course and program offerings	1	2	3	4
Flexibility of the program to meet individual needs............................	1	2	3	4
Opportunities to pursue individual projects....................................	1	2	3	4
Opportunities for student evaluation of courses and instruction.................	1	2	3	4
Opportunities to assist professors in their research...........................	1	2	3	4
Useful faculty criticism of your work..	1	2	3	4
Faculty helpfulness in dealing with class work..................................	1	2	3	4

C. Compared with other students majoring in the same field, indicate how you would rate yourself on each item below:

	WELL ABOVE AVERAGE	SOMEWHAT ABOVE AVERAGE	ABOUT AVERAGE	SOMEWHAT BELOW AVERAGE	WELL BELOW AVERAGE
Math skills	1	2	3	4	5
Laboratory skills	1	2	3	4	5
Study skills	1	2	3	4	5
Reading skills	1	2	3	4	5
Writing skills	1	2	3	4	5
Test-taking skills	1	2	3	4	5
Ability to think through problems	1	2	3	4	5
Quality of homework	1	2	3	4	5
Ability to organize work	1	2	3	4	5
Speed in solving problems	1	2	3	4	5
Time spent on homework	1	2	3	4	5
Relationships with instructors	1	2	3	4	5
Relationships with fellow students	1	2	3	4	5

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So that we know something about your background and experiences, please indicate whether each of these statements is true or false.

	TRUE	FALSE	NOT SURE/ NOT APPLICABLE
My father is (or was) in a technical, mechanical, or scientific occupation........	1	2	3
My mother is (or was) in a technical, mechanical, or scientific occupation........	1	2	3
My mother approved of my undergraduate major field................................	1	2	3
My father approved of my undergraduate major field................................	1	2	3
My mother approves of my intended graduate major field............................	1	2	3
My father approves of my intended graduate major field............................	1	2	3
I have had one or more professors who encouraged me to do graduate work in this field..	1	2	3
I know personally one or more professionals in this field.........................	1	2	3
I have had work experience in this field..	1	2	3

What was the single most important factor in your selection of a graduate field of study?

____

How different is your graduate field of study from your undergraduate major?

( ) Not at all different; the graduate field is a continuation of my undergraduate major.
( ) Slightly different.
( ) Moderately different.
( ) Greatly different; the graduate field bears little, if any, similarity to my undergraduate major.

If your graduate field of study will be markedly different from your undergraduate major field, discuss the various considerations that led you to change fields. If your graduate and undergraduate fields are about the same, discuss the factors that led to your decision to continue in the same field.

____

____

____

____

____

Thank you for participating in this research project. Your questionnaire responses are all confidential and will be used only for research purposes. We hope that the time you have devoted to completing this questionnaire has been helpful in clarifying your feelings and your plans for graduate study. We wish you the very best of luck in your academic and professional pursuits.

Please return the questionnaire in the postage-paid envelope provided, or mail it to

Educational Testing Service
Rosedale Road, 13-R
Princeton, NJ 08541

If you would like a summary of the survey results, circle the code number on the top of the front cover of this questionnaire.

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PLANS FOR GRADUATE STUDY

A. In what field do you plan to do graduate work? ______________________________

Using the major field category codes on the back of this questionnaire, please classify your intended graduate field into one of the categories and enter the code in this box --------------------> ☐

Approximately when did you choose this field?

( ) Before college
( ) Freshman year
( ) Sophomore year
( ) Junior year
( ) Senior year

B. Please indicate the extent to which you agree or disagree with each of these statements about your intended field of study.

	STRONGLY AGREE	AGREE	NOT SURE/ NEUTRAL	DISAGREE	STRONGLY DISAGREE
There should be many jobs available in this field when I complete graduate work...	1	2	3	4	5
Success in this field will require good interpersonal skills......................	1	2	3	4	5
This field really doesn't interest me much, but an advanced degree in it will be useful to my career..	1	2	3	4	5
This field provides many opportunities for a substantial income...................	1	2	3	4	5
There are exciting new developments in this field.................................	1	2	3	4	5
I am under pressure from my family to do graduate work in this field..............	1	2	3	4	5
In this field I will have an opportunity to make a significant contribution.......	1	2	3	4	5
This is a prestigious field...	1	2	3	4	5
I truly love this field and want to learn as much as possible about it............	1	2	3	4	5
Success in this field will require good technical skills..........................	1	2	3	4	5
I expect this field to provide good opportunities for advancement.................	1	2	3	4	5
A graduate degree in this field will prepare me for a number of different career possibilities..	1	2	3	4	5
I know personally one or more professionals in this field.........................	1	2	3	4	5
I have already invested time and effort into this field and feel I must continue..	1	2	3	4	5
I have had work experience in this field..	1	2	3	4	5
I had one or more professors who strongly encouraged me to do graduate work in this field..	1	2	3	4	5
I expect my graduate courses to be less demanding than the undergraduate courses in my major...	1	2	3	4	5

D. To what extent do you want a job that involves each of the following activities?

	NOT AT ALL	POSSIBLY	DEFINITELY
Teach, train, or instruct..................................	1	2	3
Write, prepare reports or articles........................	1	2	3
Analyze numerical data....................................	1	2	3
Operate instruments or equipment..........................	1	2	3
Interpret and evaluate information........................	1	2	3
Concentrate on details....................................	1	2	3
Advise, counsel, interview................................	1	2	3
Explain, answer questions.................................	1	2	3
Reason mathematically.....................................	1	2	3
Design instruments or equipment...........................	1	2	3
Keep records, catalog information.........................	1	2	3
Think quickly...	1	2	3
Persuade, negotiate, sell.................................	1	2	3
Make presentations..	1	2	3
Chart or diagram data.....................................	1	2	3
Draw or draft...	1	2	3
Work with computers.......................................	1	2	3
Trouble shoot problems....................................	1	2	3
Supervise or direct others................................	1	2	3
Read extensively..	1	2	3
Gather data...	1	2	3
Develop ideas...	1	2	3

CAREER PLANS AND EXPECTATIONS

A. In answering this question, assume the current value of the dollar does not change. Also assume you will complete graduate school.

Once you are out of graduate school and have become established professionally -- in perhaps 10 or 15 years -- about how much money do you expect to earn annually?

( ) Less than $20,000
( ) $ 20,000 - $ 30,000
( ) $ 30,000 - $ 40,000
( ) $ 40,000 - $ 50,000
( ) $ 50,000 - $ 75,000
( ) $ 75,000 - $100,000
( ) $100,000 - $150,000
( ) $150,000 - $200,000
( ) $200,000 - $250,000
( ) More than $250,000

How important is it to you to have an income at least that large?

( ) Not important at all
( ) Somewhat important
( ) Quite important
( ) Extremely important

B. Jobs may be characterized in a number of ways. For example, a salesperson works largely with people while a mechanic works largely with things. Most jobs require some balance between the two extremes. On the following scales, rate the characteristics of the job you would most like to have.

MORE OF THIS CHARACTERISTIC			ABOUT EQUAL			MORE OF THIS CHARACTERISTIC
Practical/applied	( )	( )	( )	( )	( )	Theoretical/basic
Working with people	( )	( )	( )	( )	( )	Working with things
Working with math	( )	( )	( )	( )	( )	Working with words
Attention to detail	( )	( )	( )	( )	( )	Attention to total picture
Competitive emphasis	( )	( )	( )	( )	( )	Cooperative emphasis

C. How important to you is each of the following job characteristics or opportunities?

	NOT IMPORTANT	SOMEWHAT IMPORTANT	VERY IMPORTANT	EXTREMELY IMPORTANT
1. Technical challenge	1	2	3	4
2. Opportunities for advancement	1	2	3	4
3. Pleasant co-workers	1	2	3	4
4. Physically attractive environment	1	2	3	4
5. Flexible work schedule	1	2	3	4
6. Prestige/respect	1	2	3	4
7. Job security	1	2	3	4
8. Variety	1	2	3	4
9. Contribution to society	1	2	3	4

Now decide which three of these characteristics are most important to you, and circle the numbers (1 through 9) to the left of those three characteristics.

MAJOR FIELD CODES

Natural Sciences

01	Agriculture
02	Biological Sciences
03	Chemistry
04	Computer and Information Sciences
05	Earth, Atmospheric and Marine Sciences
06	Health and Medical Sciences
07	Mathematical Sciences
08	Physics and Astronomy
09	Other Natural Sciences

Engineering

10	Chemical Engineering
11	Civil Engineering
12	Electrical and Electronics Engineering
13	Industrial Engineering
14	Materials Engineering
15	Mechanical Engineering
16	Other Engineering

Social Sciences

17	Anthropology and Archaeology
18	Economics
19	Political Science
20	Psychology
21	Sociology
22	Other Social Sciences

Humanities and Arts

23	Arts: History, Theory and Criticism
24	Arts: Performance and Studio
25	English Language and Literature
26	Foreign Languages and Literature
27	History
28	Philosophy
29	Other Humanities and Arts

Education

30	Education Administration
31	Curriculum and Instruction
32	Early Childhood Education
33	Elementary Education
34	Education Evaluation and Research
35	Higher Education
36	Secondary Education
37	Special Education
38	Student Counseling and Personnel Services
39	Other Education

Business

40	Accounting
41	Banking and Finance
42	Business Administration and Management
43	Other Business

Other Fields

44	Architecture and Environmental Design
45	Communications
46	Home Economics
47	Library and Archival Science
48	Public Administration
49	Religion, Theology, and Ministry
50	Social Work
51	Law

99	Other Field Not Easily Classified
00	Undecided

Appendix D

Postcard Reminder

Dear GRE Test Taker:

Recently we sent you a questionnaire about your undergraduate studies and career plans. If you have not yet filled it out, please complete it as soon as possible and return it to

Jerilee Grandy
ETS, 13-R
Rosedale Road
Princeton, NJ 08541

If you have already mailed it, ignore this reminder. Thank you for your participation in this research project.

Sincerely,

Jerilee Grandy

Jerilee Grandy
Project Director

Appendix E

Followup Letter

EDUCATIONAL TESTING SERVICE ETS PRINCETON, N.J. 08541

609-921-9000
609-734-1090 (Fax)
CABLE-EDUCTESTSVC
•
DIVISION OF APPLIED
MEASUREMENT RESEARCH

April 1991

Dear GRE Test Taker:

In February we sent you a questionnaire asking about your undergraduate experiences, your thoughts about a career, and your plans for graduate school. We have not yet received your response.

Some of the people we have surveyed apparently have decided not to go to graduate school, and for this reason have not responded. We would like to receive responses from everyone we surveyed so we can be sure the results accurately represent all science, math, and engineering majors who took the GRE in December.

If you have not yet responded, we would greatly appreciate your taking 15 minutes or so to complete the enclosed questionnaire and mailing it to us in the enclosed envelope.

If you feel that the questionnaire does not apply to you -- if you have changed your mind about graduate school, for example -- please make a note to that effect on this letter and return it to us. We still want to hear from you and will read whatever comments you make.

All of your questionnaire responses and comments will be confidential. The findings from this research will be published by the GRE Board, and we expect the educational and scientific community to be greatly interested in the information that you and your fellow students can provide.

If you have any questions about the project, feel free to call me at 609-734-5548.

Thank you for your participation.

Sincerely,

Jerilee Grandy

Jerilee Grandy
Project Director

Appendix F

Correlation Matrix of All Questionnaire Items, Change, Gender, and Ethnic Indicators, for Total Weighted Sample

```
15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH                                          Page    9
12:20:37    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                    - -  Correlation Coefficients  - -

              SEXIND     RACEIND    CHANGIND   A1         A2         A3         A4         A5         A6         A7         A8

SEXIND       1.0000      .0671**    .0277      .0616**    .0564**    .0382*     .0003     -.1113**   -.0642**   -.0022     -.0256
RACEIND       .0671**   1.0000     -.0004      .0883**   -.0371*     .0945**   -.1201**   -.1099**   -.0839**   -.0209     -.0111
CHANGIND      .0277     -.0004     1.0000      .1801**    .0289      .0313*     .0035     -.2637**   -.0502**    .0779**   -.0287
A1            .0616**    .0883**    .1801**   1.0000      .0053      .1070**   -.0638**   -.3941**   -.1086**    .1815**    .0470**
A2            .0564**   -.0371*     .0289      .0053     1.0000     -.1321**    .0918**    .0665**    .0465**   -.1190**    .0503**
A3            .0382*     .0945**    .0313*     .1070**   -.1321**   1.0000     -.0856**   -.1077**   -.0812**    .1015**   -.1007**
A4            .0003     -.1201**    .0035     -.0638**    .0918**   -.0856**   1.0000      .1662**    .2631**   -.0574**    .0568**
A5           -.1113**   -.1099**   -.2637**   -.3941**    .0665**   -.1077**    .1662**   1.0000      .2129**   -.1793**    .1100**
A6           -.0642**   -.0839**   -.0502**   -.1086**    .0465**   -.0812**    .2631**    .2129**   1.0000     -.0737**    .1039**
A7           -.0022     -.0209      .0779**    .1815**   -.1190**    .1015**   -.0574**   -.1793**   -.0737**   1.0000     -.0283
A8           -.0256     -.0111     -.0287      .0470**    .0503**   -.1007**    .0568**    .1100**    .1039**   -.0283     1.0000
A9           -.0164     -.1024**   -.0814**   -.2488**    .0568**   -.1224**    .1476**    .2566**    .2003**   -.2226**    .0271
A10          -.0192     -.0819**    .0032      .0309      .0787**   -.2272**    .1929**    .0681**    .1910**    .0242      .0202
A11          -.0638**    .0533**    .0562**    .1856**   -.0432**    .3165**   -.0504**   -.1168**    .0066      .1603**   -.0594**
A12          -.0062     -.0365*    -.0532**   -.1817**    .2376**   -.1785**    .2594**    .2465**    .2386**   -.1330**    .1326**
A13           .0520**    .0855**    .0980**    .1833**   -.0219      .1198**   -.0709**   -.2501**   -.1374**    .1098**   -.0703**
A14          -.0682**   -.0271     -.0334*    -.0839**   -.0162     -.0377*     .0905**    .1268**    .1513**    .0180      .0641**
A15           .0476**   -.0841**   -.0423**   -.1765**    .3282**   -.1798**    .1947**    .1628**    .0972**   -.1328**    .0787**
A16           .0596**    .0354*     .1284**    .2797**    .0197      .0822**   -.0894**   -.3500**   -.1117**    .2208**   -.0818**
A17           .0802**   -.0419**   -.0218     -.1522**    .2564**   -.1725**    .1243**    .1525**    .1102**   -.1165**    .1010**
A18           .0059      .1096**    .1775**    .4327**   -.0744**    .1135**   -.1180**   -.4350**   -.1323**    .1669**   -.1015**
A19          -.0314*    -.0906**   -.0345*    -.1470**    .0748**   -.0688**    .2530**    .1628**    .2758**   -.0404*     .0758**
A20           .0101     -.0784**   -.0227     -.0585**    .1654**   -.2678**    .1581**    .0969**    .1057**   -.0541**    .0808**
A21           .0195      .1301**    .1058**    .2342**   -.0623**    .1530**   -.0941**   -.2826**   -.1417**    .1538**   -.0879**
A22          -.1521**   -.0183     -.1661**   -.1831**    .0064     -.0811**    .0597**    .2922**    .1205**   -.2457**    .1256**
A23          -.1238**    .0206     -.0024      .0956**   -.0988**    .3529**   -.0406*    -.0614**    .0329*     .1543**   -.0523**
A24           .0518**   -.1306**   -.0290     -.1684**    .3029**   -.2906**    .1876**    .1816**    .1528**   -.1468**    .0091**
A25           .0680**   -.1197**   -.0645**   -.1764**    .1308**   -.2120**    .1190**    .1494**    .0892**   -.1339**    .0412**
A26          -.0022     -.0681**   -.0675**   -.1955**    .0558**   -.0062      .1171**    .2215**    .3130**   -.1053**    .0746**
A27          -.0125      .0131      .0355*     .1109**   -.0834**    .2792**   -.0125     -.0911**   -.0156      .0960**   -.0167
A28           .0045      .0302      .0295      .1622**   -.2752**    .2000**   -.0803**   -.1232**   -.0033      .1228**   -.0098
B1           -.0540**    .0762**    .0353*     .1734**   -.0991**    .1635**   -.0002     -.1145**    .0244      .1322**   -.0428**
B2           -.0054      .0254      .0197      .1421**   -.1199**    .1735**   -.0532**   -.1574**   -.0508**    .0820**   -.1306**
B3            .0029      .0368*     .0063      .0594**   -.0947**    .0561**   -.0119     -.0587**   -.0048      .1678**   -.0611**
B4           -.0068      .0934**    .0498**    .0979**   -.1788**    .0948**   -.0817**   -.1536**   -.0330*     .0840**   -.0261
B5           -.0420**    .0420**    .0293      .0503**   -.1002**    .1888**    .0226     -.0852**    .0996**    .0936**   -.0733**
B6           -.0529**    .1022**    .0233      .1787**   -.1625**    .2492**   -.1997**   -.1591**   -.1235**    .1166**   -.0910**
B7           -.0358*     .0857**    .0700**    .2356**   -.2171**    .2274**   -.1626**   -.2057**   -.1439**    .1466**   -.0689**
B8           -.0229      .1098**    .0056      .1457**   -.2957**    .2187**   -.1751**   -.1811**   -.1475**    .1034**   -.0799**
B9            .0761**    .0388*    -.0069      .0929**   -.0047      .0760**   -.0293     -.0927**   -.0558**    .0005     -.0729**
B10           .0260      .0453**    .0184      .1059**   -.1119**    .2120**   -.1739**   -.1356**   -.1494**    .0861**   -.1043**
B11           .0233      .0890**    .0263      .1219**   -.0973**    .1357**   -.1258**   -.1371**   -.0897**    .1284**   -.0644**
B12           .0066      .0502**    .0576**    .1216**   -.1013**    .1212**   -.0749**   -.1445**   -.0978**    .0737**   -.0134
B13          -.0445**    .0244      .0500**    .0767**   -.0828**    .1190**    .0015     -.0829**   -.0335*     .1505**   -.0339*
B14          -.0097      .0674**    .0544**    .1440**   -.1809**    .2116**   -.1247**   -.1682**   -.1150**    .1016**   -.0329*

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91    CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH                                      Page  10
12:20:37     SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                          - -  Correlation Coefficients  - -

              SEXIND      RACEIND     CHANGIND    A1          A2          A3          A4          A5          A6          A7          A8

B15          -.0216       .1309**     .0411**     .1936**    -.2464**     .2642**    -.1709**    -.2069**    -.1738**     .0958**    -.0927**
C1            .1004**     .0069       .0269       .0229       .0735**     .0163      -.0360*     -.0952**    -.1384**    -.0733**    -.0746**
C2            .0688**    -.0013       .0496**     .1175**    -.0361*      .0257       .0139      -.1359**    -.0530**     .4446**    -.0392*
C3           -.0909**     .0591**     .0285       .1432**     .0473**     .0438**    -.0477**    -.1270**    -.0595**    -.0163      -.0129
C4           -.0196       .0498**    -.0188      -.0145       .0225       .0254      -.1094**    -.0477**    -.0818**     .0454**     .0472**
C5            .0209       .0631**    -.0422**    -.0630**    -.0230       .9320*     -.0859**    -.0039      -.0609**    -.0001       .0024
C6            .1280**     .1363**     .0314*      .1286**     .0559**     .0782**    -.1420**    -.1564**    -.2519**     .0075      -.1082**
C7            .2189**     .0817**     .0273       .1830**     .0564**     .0058      -.0536**    -.1584**    -.1958**     .0671**    -.0851**
C8           -.0459**     .0169       .0294       .1792**     .0055       .0457**    -.0519**    -.1290**    -.0960**     .0342*      .0127
C9           -.1252**    -.0092      -.0236       .1024**     .0162       .0042      -.0062      -.0821**    -.0076       .0351*     -.0225
C10           .0817**     .0516**     .0288       .1255**     .1189**    -.0060      -.1039**    -.1530**    -.1738**     .0334*     -.0865**
C11          -.1372**    -.0177       .0213       .0313*     -.0243      -.0353*      .0863**    -.0396*      .0923**     .0184       .0635**
C12          -.0260       .0653**     .0266       .2298**    -.1084**     .1375**    -.1253**    -.2062**    -.1363**     .1485**    -.0400*
C13          -.0937**    -.0506**     .0172       .1751**    -.0865**     .2162**    -.0148      -.0986**     .0220       .1967**    -.0470**
IIA1         -.2250**     .1383**    -.0659**    -.0007      -.0683**     .0386*     -.0439**     .0318*      .0382*     -.0267       .1869**
IIA2         -.0588**     .1096**    -.0275      -.0219      -.0364*      .0047      -.0938**    -.0494**    -.0336*      .0249      -.0547**
IIB1         -.1187**    -.0195       .0042       .0261      -.0247       .0219       .0318*      .0488**     .0745**     .1159**    -.0537**
IIB2         -.1803**    -.0483**    -.1173**    -.1073**    -.0527**     .0059      -.0134       .1161**     .1219**    -.1122**     .0097
IIB3          .1522**    -.0227       .0637**     .0708**     .0776**     .0180       .0318*     -.0509**    -.0598**    -.1093**    -.0509**
IIB4         -.0630**    -.0122       .0107       .0855**    -.0105       .0099       .0550**    -.0478**     .0035       .0524**    -.0218
IIB5          .0436**    -.0481**     .0009       .0323*      .0417**    -.1124**     .0014       .0121       .0082      -.0093      -.0633**
IIC1         -.1797**     .0108      -.0960**    -.1597**    -.0484**    -.0555**    -.0555**     .1780**     .0354*     -.1154**     .0583**
IIC2          .0179       .1475**    -.0359*     -.0904**    -.0305       .0150      -.1358**    -.0247      -.0291      -.0418**     .0515**
IIC3          .1054**     .0213       .0143      -.0310       .0255      -.0661**    -.0385*     -.0100      -.0533**    -.0273      -.0026
IIC4         -.0182       .0836**     .0407*      .0427**    -.0467**     .0236      -.0324*     -.0719**    -.0630**     .0546**    -.0478**
IIC5          .0725**     .0749**     .0380*      .0543**    -.0494**     .0036      -.0620**    -.0746**     .0116      -.0569**    -.0388*
IIC6          .1009**     .1069**     .0037      -.0218      -.0922**     .0061      -.0673**    -.0467**    -.0336*     -.0429**     .0128
IIC7          .0457**     .0959**    -.0448**    -.0937**    -.0831**    -.0033      -.0601**     .0639**    -.0103      -.0684**     .0220
IIC8          .0020       .0053       .0345*     -.0305      -.0114      -.0630**     .0035      -.0134      -.0025      -.0622**    -.0064
IIC9          .1541**     .0668**     .0650**    -.0723**     .0252      -.0342*      .0463**     .0197      -.0119      -.1385**     .0127
IIC10         .1115**    -.0088       .0883**     .0736**     .0076       .0270       .0312      -.0882**    -.0753**     .0195      -.1016**
IIC11         .1093**    -.0174       .0825**     .0954**     .0127       .0070       .0463**    -.0957**    -.0272      -.0268      -.0869**
IIC12         .0860**    -.0068       .0492**     .0296       .0564**    -.0094       .1077**    -.0207       .0093      -.0802**    -.0183
IID1         -.0303      -.0052       .0781**    -.0150       .0477**    -.0554**     .0810**     .0112       .0555**    -.0027      -.0048
IID2         -.0377*     -.0368*      .0200      -.0053       .0059       .0075       .0416**     .0825**     .0555**    -.1020**    -.0488**
IID3         -.0560**     .0223      -.0439**    -.0621**    -.0323*     -.0362*     -.0032       .0988**     .0336*      .0036      -.0009
IID4         -.0351*     -.0209      -.1387**    -.1408**     .0152      -.0169      -.0529**     .1413**    -.0419**    -.2807**    -.0051
IID5         -.0272      -.0352*     -.0379*     -.0762**    -.0239      -.0575**     .0301       .0952**     .0195      -.0722**     .0351*
IID6          .0654**    -.0176      -.0589**    -.1541**    -.0285      -.0012      -.0057       .1140**     .0252      -.1390**    -.0088
IID7          .0851**     .0643**     .1162**     .0589**     .0309       .0158       .0284      -.0931**    -.0055       .0313*     -.0047
IID8          .0612**     .0104       .0787**    -.0240       .0203      -.0120       .0507**     .0207       .0504**    -.0130       .0032
IID9         -.1424**     .0191      -.0302      -.0067      -.0908**    -.0032       .0194       .0646**     .0949**     .1019**     .0604**
IID10        -.2648**     .0666**    -.0860**    -.0343*     -.0874**     .0126      -.0692**     .0876**     .0134      -.0816**     .1067**
IID11         .1797**     .0049       .0086      -.0621**     .0307       .0093      -.0136       .0122      -.0222      -.0565**    -.0322*
IID12         .0106       .0253       .0347*     -.1130**    -.0726**     .0133       .0690**     .0726**     .0932**    -.0773**     .0195

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)         " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH                                              Page  11
12:20:37    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                      - -  Correlation Coefficients  - -

            SEXIND      RACEIND     CHANGIND    A1          A2          A3          A4          A5          A6          A7          A8

IID13       -.0632**     .1137**     .0646**     .0035      -.0333*      .0293      -.0440**    -.0554**    -.0229       .0202      -.0108
IID14       -.0327*      .0301       .0448**    -.0755**    -.0259      -.0200       .0361*      .0699**     .0028      -.0636**     .0126
IID15        .0664**     .0053      -.0329*     -.0466**     .0283       .0310       .0137       .0640**     .0056      -.1345**    -.0410**
IID16       -.0522**     .0455**    -.0174      -.0169      -.0361*      .0457**    -.0043       .0209       .0218      -.0952**    -.1063**
IID17       -.1760**     .0556**    -.0434**    -.0675**    -.0630**    -.0398*     -.0001       .1051**     .0928**    -.0559**     .1002**
IID18       -.1872**    -.0144      -.0641**    -.0990**    -.0611**    -.0004      -.0175       .0919**     .0983**    -.0719**     .0752**
IID19        .0131       .1028**     .0251      -.0215      -.0260      -.0560**    -.0097      -.0162      -.0779**    -.0129       .1090**
IID20       -.0096      -.0292       .0255       .0171      -.0144       .0443**     .0615**     .0923**     .0950**    -.0409*     -.0415**
IID21        .0743**    -.0404*     -.0376*     -.0957**     .0579**    -.0182       .0340*      .1296**     .0350*     -.2053**    -.0868**
IID22       -.1470**     .0189       .0044      -.0628**    -.0797**    -.0094       .0505**     .1468**     .1034**    -.1584**     .0429**
IIIB1       -.0108      -.0249       .0305       .0316*     -.0373*      .0880**    -.0067      -.0371*     -.0357*      .0061      -.4953**
IIIB2       -.0814**    -.0458**    -.1369**    -.0467**    -.0462**     .0504**    -.0245       .0640**     .0160      -.0078      -.0450**
IIIB3        .0368*     -.1059**     .0158      -.1856**    -.0309      -.0615**     .1449**     .1806**     .0612**    -.1247**     .0301
IIIB4        .0333*     -.0537**     .0975**     .0099       .0174       .0506**     .0611**    -.0531**     .0054       .0237      -.3939**
IIIB5        .0355*      .0375*      .1085**     .1432**    -.0098       .0730**    -.0429**    -.2256**    -.0591**     .2194**    -.0944**
IIIB6        .0159      -.0569**     .0489**    -.0708**     .0519**    -.0203       .1317**     .0757**     .0972**    -.0412**     .0091
IIIB7       -.0682**     .0119      -.0398*      .1069**     .0012       .0717**    -.1153**    -.1164**    -.0161       .1393**    -.0416**
IIIB8        .0192      -.0325*      .0628**     .0368*      .0363*      .0610**     .0034      -.0873**     .0048      -.0008      -.1340**
IIIB9       -.0572**     .0748**     .0026       .2740**     .0283       .0778**    -.1568**    -.2280**    -.0729**     .1645**     .0305
IIIB10       .1216**    -.0287       .1497**     .0996**     .0325*      .0453**     .0713**    -.1633**    -.0395*      .1586**    -.1264**
IIIB11       .0029      -.0835**     .0660**     .0872**     .0309       .0664**     .0595**    -.0601**    -.0390*      .0650**    -.2752**
IIIB12      -.0117      -.0416**     .0166       .0915**    -.0056       .0799**    -.0669**    -.1084**    -.0429**     .0993**    -.2669**
IIIB13       .0013       .0227      -.0167       .1065**     .0142       .0592**    -.0358*     -.1333**     .0212       .0518**    -.0549**
IIIB14      -.0611**    -.0995**     .0537**     .0260      -.0199      -.0163       .0958**    -.0601**     .0787**    -.0278       .0371*
IIIB15      -.0217       .0132       .0525**     .1071**    -.0247       .0217      -.0092      -.1420**     .0106       .1155**    -.0553**
IIIB16       .0186       .0709**     .0580**     .2202**    -.0037       .0868**    -.0391*     -.2945**    -.0734**     .1148**    -.0519**
IIIB17       .0460**    -.0133      -.0986**    -.0200       .0861**    -.0247       .1207**     .0626**     .0806**    -.0247       .0137
IIIC1        .0090       .0768**    -.0073      -.0269       .0626**     .0082      -.0232      -.0453**    -.0377*      .0134      -.0037
IIIC2       -.1076**    -.0241      -.0249      -.0307       .0638**    -.0580**     .0571**     .0575**     .0202      -.0699**     .0152
IIIC3        .0232       .0851**     .0175       .0283      -.0653**     .0431**    -.0168      -.0126      -.0029      -.0046      -.0041
IIIC4        .0445**     .1149**     .0025       .0192      -.0143       .0576**    -.0056      -.0465**     .0363*     -.0167      -.0228
IIIC5        .0152       .0684**     .0354*      .0383*     -.0386*      .0511**    -.0460**    -.0730**     .0204       .0090      -.0527**
IIIC6        .0631**     .1177**     .0392*      .0345*     -.0021       .0800**    -.0107      -.0727**     .0422**     .0177      -.0379*
IIIC7        .0063       .0652**     .0330*      .1427**    -.0111       .0179      -.0378*     -.2063**    -.0698**     .0787**    -.0372*
IIIC8        .0009       .0296      -.0140       .0761**     .0158       .0494**    -.0141      -.0923**     .0171       .0380*     -.0100
IIIC9       -.0188       .0204       .0520**     .0992**    -.0028       .0057      -.0249      -.1002**     .0111       .0508**    -.0693**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH                                Page  12
12:20:37    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                       - -  Correlation Coefficients  - -

            A9        A10       A11       A12       A13       A14       A15       A16       A17       A18       A19

SEXIND    -.0164    -.0192    -.0638**  -.0062     .0520**  -.0682**   .0476**   .0596**   .0802**   .0059    -.0314*
RACEIND   -.1024**  -.0819**   .0533**  -.0365*    .0855**  -.0271    -.0841**   .0354*   -.0419**   .1096**  -.0906**
CHANGIND  -.0814**   .0032     .0562**  -.0532**   .0980**  -.0334*   -.0423**   .1284**  -.0218     .1775**  -.0345*
A1        -.2488**   .0309     .1856**  -.1817**   .1833**  -.0839**  -.1765**   .2797**  -.1522**   .4327**  -.1470**
A2         .0568**   .0787**  -.0432**   .2376**  -.0219    -.0162     .3282**   .0197     .2564**  -.0744**   .0748**
A3        -.1224**  -.2272**   .3165**  -.1785**   .1196**  -.0377*   -.1798**   .0822**  -.1725**   .1135**  -.0688**
A4         .1476**   .1929**  -.0504**   .2594**  -.0709**   .0905**   .1947**  -.0894**   .1243**  -.1180**   .2530**
A5         .2566**   .0681**  -.1168**   .2465**  -.2501**   .1268**   .1628**  -.3500**   .1525**  -.4350**   .1628**
A6         .2003**   .1910**   .0066     .2386**  -.1374**   .1513**   .0972**  -.1117**   .1102**  -.1323**   .2750**
A7        -.2226**   .0242     .1603**  -.1330**   .1098**   .0180    -.1328**   .2208**  -.1165**   .1669**  -.0404*
A8         .0271     .0202    -.0594**   .1326**  -.0703**   .0641**   .0787**  -.0818**   .1010**  -.1015**   .0758**
A9        1.0000     .0355*   -.1060**   .1880**  -.1976**   .2502**   .1917**  -.2196**   .1409**  -.2759**   .0195
A10        .0355*   1.0000     .0024     .2241**  -.0558**   .0745**   .0915**   .0844**   .1146**  -.0450**   .1530**
A11       -.1060**   .0024    1.0000    -.1152**   .0911**  -.0238    -.1147**   .1429**  -.1344**   .2015**  -.0636**
A12        .1880**   .2241**  -.1152**  1.0000    -.1368**   .1410**   .3666**  -.1149**   .2538**  -.2692**   .2648**
A13       -.1976**  -.0558**   .0911**  -.1368**  1.0000    -.0989**  -.0872**   .2632**  -.3483**   .1730**  -.0640**
A14        .2502**   .0745**  -.0238     .1410**  -.0989**  1.0000     .1019**  -.0265     .0544**  -.0824**  -.0017
A15        .1917**   .0915**  -.1147**   .3666**  -.0872**   .1019**  1.0000    -.0927**   .2561**  -.2030**   .1814**
A16       -.2196**   .0844**   .1429**  -.1149**   .2632**  -.0265    -.0927**  1.0000    -.1572**   .3296**  -.0623**
A17        .1409**   .1146**  -.1344**   .2538**  -.3483**   .0544**   .2561**  -.1572**  1.0000    -.1810**   .0838**
A18       -.2759**  -.0450**   .2015**  -.2692**   .1730**  -.0824**  -.2030**   .3296**  -.1810**  1.0000    -.1292**
A19        .0195     .1530**  -.0636**   .2648**  -.0640**  -.0017     .1814**  -.0623**   .0838**  -.1292**  1.0000
A20        .1020**   .2580**  -.1480**   .1829**  -.0590**   .0202     .1688**  -.0929**   .1396**  -.1376**   .1509**
A21       -.2176**  -.0736**   .1245**  -.1945**   .7456**  -.0905**  -.2055**   .3251**  -.3756**   .2606**  -.1033**
A22        .1426**   .0106    -.1534**   .1223**  -.1698**   .0605**   .0559**  -.3503**   .0803**  -.1953**   .1229**
A23       -.1473**  -.0407*    .3248**  -.1795**   .1135**  -.0606**  -.2391**   .1208**  -.1423**   .1396**   .0126
A24        .1698**   .1805**  -.1810**   .3504**  -.2773**   .0770**   .4588**  -.1342**   .4548**  -.2078**   .2084**
A25        .1594**   .1083**  -.2517**   .1654**  -.1364**   .0216     .2591**  -.1095**   .1651**  -.1805**   .1327**
A26        .1430**   .0514**  -.0370*    .2234**  -.0018**   .1430**   .1908**  -.0862**   .0676**  -.1941**   .1434**
A27       -.0846**  -.0444**   .1763**  -.0954**   .0788**   .0086    -.0974**   .0864**  -.1804**   .1180**  -.0199
A28       -.1170**  -.0207     .0908**  -.2656**   .0775**  -.0052    -.4232**   .0990**  -.1508**   .1572**  -.1150**
B1        -.1688**   .0569**   .2059**  -.1736**   .1173**  -.0041    -.2683**   .1430**  -.1125**   .2099**  -.0308
B2        -.1612**  -.0210     .1631**  -.2162**   .2008**  -.0150    -.2764**   .1334**  -.2235**   .2137**  -.1016**
B3        -.0533**   .0616**   .0413**  -.0957**  -.0114     .0244    -.1873**   .1019**   .0067     .1093**  -.0678**
B4        -.1231**  -.0485**   .0786**  -.2075**   .1318**   .0333*   -.3791**   .0906**  -.1007**   .1629**  -.0953**
B5        -.0763**   .0697**   .1759**  -.1197**   .0460**   .0502**  -.1993**   .1033**  -.0604**   .1567**  -.0147
B6        -.1464**  -.1106**   .1773**  -.3270**   .1207**  -.0785**  -.3816**   .0955**  -.1789**   .2321**  -.1766**
B7        -.2133**  -.0432**   .1421**  -.3040**   .1852**  -.0659**  -.4345**   .1441**  -.2155**   .2420**  -.1898**
B8        -.1811**  -.2101**   .1434**  -.3026**   .3144**  -.0993**  -.3293**   .1086**  -.4696**   .2160**  -.1497**
B9        -.0965**  -.0029     .1042**  -.1055**   .0796**  -.0455**  -.1643**   .0789**   .0369*    .1176**  -.1224**
B10       -.1505**  -.1746**   .1176**  -.2503**   .1445**  -.0663**  -.2682**   .1157**  -.1748**   .1300**  -.2025**
B11       -.1032**  -.0970**   .1012**  -.2030**   .2220**  -.0064    -.1756**   .1390**  -.2140**   .1522**  -.1067**
B12       -.1331**  -.0709**   .0747**  -.2020**   .0680**  -.0332*   -.2630**   .1029**  -.0742**   .1672**  -.1227**
B13       -.1180**  -.0485**   .0813**  -.1305**   .2143**   .0423**  -.0972**   .1257**  -.0923**   .1183**  -.0047
B14       -.1443**  -.0900**   .1482**  -.3083**   .2568**  -.0502**  -.3428**   .1409**  -.3372**   .2273**  -.1582**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)        " . " printed if a coefficient cannot be computed
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BEST COPY AVAILABLE

- - Correlation Coefficients - -

	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19
B15	-.2053**	-.1978**	.1719**	-.3361**	.2846**	-.0791**	-.4172**	.1268**	-.4181**	.2169**	-.1850**
C1	-.0690**	-.0284	.0281	-.1120**	.0907**	-.2704**	.0432**	.1123**	.0322*	.0365*	-.0153
C2	-.1508**	.0803**	.1060**	-.0476**	.1523**	.0597**	-.0443**	.2694**	-.1096**	.1280**	-.0162
C3	-.1356**	-.0034	.0846**	-.0768**	.1320**	-.1237**	-.0677**	.1436**	-.1108**	.1273**	-.0548**
C4	-.0672**	-.0680**	.0358*	-.0156	.0860**	-.0045	.0121	.1092**	-.0460**	.0344*	-.0411**
C5	-.0184	-.0194	-.0197	.0051	.0935**	.0301	.0056	.0636**	-.0214	-.0168	-.0036
C6	-.1496**	-.0858**	.0689**	-.1810**	.1599**	-.0914**	-.0583**	.1539**	-.0263	.1107**	-.1532**
C7	-.1388**	.0131	.0129	-.1186**	.1638**	-.1097**	.0006	.2580**	-.0848**	.1292**	-.0423**
C8	-.1253**	.0377*	.0875**	-.0811**	.1237**	-.1246**	-.0482**	.1617**	-.1333**	.1129**	-.0306
C9	-.0520**	.0777**	.0688**	-.0188	.0928**	-.0454**	-.0321*	.0808**	-.1067**	.0984**	-.0724**
C10	-.1372**	-.0143	.0616**	-.1719**	.2033**	-.0856**	.0050	.2332**	-.0807**	.1307**	-.0680**
C11	-.0398*	.0569**	.0231	.0031	.0393*	-.0825**	-.0517**	.0687**	-.0711**	.0669**	.0386*
C12	-.2047**	-.0751**	.1220**	-.1816**	.3995**	-.1396**	-.1945**	.2387**	-.5313**	.1960**	-.0742**
C13	-.1052**	-.0118	.3321**	-.0999**	.1467**	-.0666**	-.0893**	.1792**	-.2464**	.1353**	-.0155
IIA1	.0292	-.0709**	.0385*	-.0142	-.0305	.0805**	-.0329*	-.1296**	-.0448**	.0127	-.0371*
IIA2	-.0617**	-.0907**	-.0244	-.1188**	.0225	-.0506**	-.0877**	.0145	-.0435**	.0808**	-.0827**
IIB1	.0270	.0782**	.0918**	.0679**	-.0866**	.1237**	-.0111	-.0252	-.0383*	.0010	-.0024
IIB2	.0704**	.0573**	.0248	-.0225	-.0822**	.0789**	-.0047	-.0573**	-.0371*	-.0486**	.0524**
IIB3	.0120	-.0173	-.0043	-.0604**	.0591**	-.2698**	.0585**	-.0060	.0252	.0277	-.0183
IIB4	-.0204	.0825**	.0994**	-.0398*	.0556**	-.0767**	-.0622**	.0217	-.0460**	.0509**	-.0471**
IIB5	.0299	.1813**	.0292	-.0086	.0406*	-.0235	.0113	.0043	.0114	-.0079	.0271
IIC1	.1391**	-.0464**	-.0632**	.0636**	-.1670**	.1331**	-.0162	-.2066**	.0222	-.1565**	-.0349*
IIC2	.0110	-.1458**	-.0709**	-.0823**	-.0306	-.0335*	-.0213	-.1129**	.0160	-.0126	-.0705**
IIC3	.0468**	.0028	-.0976**	-.0361*	-.0072	-.0014	-.0177	-.0471**	.0830**	-.0451**	-.0338*
IIC4	.0164	-.0373*	-.0070	-.0307	.0472**	.0103	-.0731**	.0337*	.0010	.0495**	-.0128
IIC5	.0509**	-.0009	.0689**	-.0725**	.0176	.0132	-.0777**	-.0344*	.0003	.0762**	-.0432**
IIC6	.0447**	-.1190**	-.0944**	-.0319*	.0396*	-.0104	-.0215	-.1156**	.0305	-.0034	-.0388*
IIC7	.0635**	-.0955**	-.0641**	-.0852**	-.0052	-.0541**	-.0289	-.0941**	.0453**	-.0574**	-.0553**
IIC8	.0904**	-.0349*	-.0381*	-.0115	.0115	-.0022	-.0191	-.1030**	.0249	-.0186	-.0611**
IIC9	.1285**	-.0798**	-.0655**	.0167	-.0130	-.0365*	.0485**	-.1438**	.0813**	-.0573**	.0180
IIC10	-.0182	-.0321	-.0094	-.0198	.0814**	-.0818**	.0050	.0713**	-.0032	.1008**	.0329*
IIC11	.0257	-.0462**	.0455**	-.0133	.0920**	-.0452**	.0229	.0421*	-.0161	.0333*	-.0262
IIC12	.0313	-.0050	.0383*	.0322	.0391*	-.0522**	.0612**	-.0239	.0181	-.0378*	.0086
IID1	.0957**	.0667**	-.0221	.0828**	-.1056**	.0515**	-.0065	-.0925**	.0949**	-.0699**	.0304
IID2	.0843**	.0094	.0296	.0442**	-.1766**	.0166	.0390*	-.1304**	.0684**	-.0309	.0510**
IID3	.0365*	.0028	-.0211	.0358*	-.1555**	.1195**	.0215	-.0852**	.0699**	-.0622**	.0193
IID4	.0814**	-.0251	-.1205**	-.0174	-.0335*	-.0751**	.0413**	-.1090**	.0024	-.1180**	-.0073
IID5	.1050**	.0155	-.0251	.0292	-.1086**	.0154	.0376*	-.1067**	-.0019	-.0696**	-.0193
IID6	.0825**	-.0614**	-.0831**	.0251	-.0614**	.0168	.0499**	-.1256**	.0499**	-.0770**	.0510**
IID7	-.0217	.0116	.0182	.0315*	.0236	-.0445**	.0058	-.0437**	.0572**	.0204	-.0231
IID8	.0322*	.0133	.0170	.0378*	-.0725**	.0089	.0155	-.1024**	.0469**	-.0624**	-.0103
IID9	.0105	.0491**	.0201	.0781**	-.0849**	.2995**	-.0262	-.0384*	-.0195	-.0463**	-.0013
IID10	.0324*	-.0844**	-.0318*	-.0484**	-.0233	.0869**	-.0971**	-.1097**	-.0502**	-.0487**	-.0953**
IID11	.0410**	-.0825**	.0104	-.0067	-.0402*	-.0525**	.0681**	-.0220	.1068**	-.0263	.0357*
IID12	.0673**	-.0703**	-.1020**	.0707**	-.1064**	-.0011	.0354*	-.1434**	.0152	-.0861**	-.0111

* - Signif. LE .05 ** - Signif. LE .01 (2-tailed) " . " printed if a coefficient cannot be computed

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15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH                                     Page  14
12:20:37    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                    - -  Correlation Coefficients  - -

             A9         A10        A11        A12        A13        A14        A15        A16        A17        A18        A19

IID13      -.0081     -.0868**    .0210     -.0303     -.0406*     .0098     -.0201     -.0535**    .0900**    .0500**   -.0657**
IID14       .0563**   -.0598**   -.0038      .0394*    -.1402**   -.0253      .0256     -.1780**    .1155**   -.0605**   -.0297
IID15       .0455**   -.0626**    .0096      .0043     -.1016**   -.0022      .0426**   -.0909**    .1170**   -.0699**    .0323*
IID16       .0123     -.0872**   -.0333*    -.0233      .0023     -.0265     -.0127     -.0767**    .0032     -.0043      .0016
IID17       .0407*    -.0024     -.0085      .0088     -.1186**    .1020**   -.0387*    -.1003**    .0450**   -.0700**    .0322*
IID18       .0462**   -.0254     -.0558**    .0050     -.0897**    .0564**    .0095     -.0982**    .0199     -.0856**    .0089
IID19      -.0155     -.1136**   -.1054**   -.0098     -.0261     -.0181      .0154     -.1082**    .0453**   -.0256     -.0441**
IID20       .0699**    .0257      .0563**    .0473**   -.0962**    .0463**   -.0009     -.1148**    .0073     -.0590**    .0120
IID21       .1102**    .0056     -.0278      .0339*    -.1150**   -.0350*     .0881**   -.0746**    .1120**   -.1049**    .0463**
IID22       .1158**   -.0122     -.0143      .0283     -.1287**    .0065     -.0211     -.2029**   -.0118     -.0787**    .0058
IIIB1      -.0093     -.0453**    .0224     -.0649**    .0404*    -.0219     -.0410**    .0249     -.0829**    .0379*    -.0544**
IIIB2       .0302      .0368*     .0637**    .0151     -.0096      .0654**   -.0105      .0388*    -.1050**    .0076     -.0445**
IIIB3       .1886**    .0127     -.0783**    .1060**   -.1068**    .0691**    .1200**   -.2068**    .0982**   -.2331**    .1190**
IIIB4       .0062      .0344*     .0990**   -.0199      .0179     -.0706**   -.0353*     .0599**   -.0095      .0217      .0007
IIIB5      -.1536**    .0172      .0855**   -.0792**    .1107**   -.0378*    -.0444**    .2409**   -.0215      .1508**    .0119
IIIB6       .1513**    .0254      .9461**    .0244     -.0527**    .0563**    .1072**   -.1062**    .1129**   -.0733**    .0742**
IIIB7      -.2012**    .0731**    .0726**   -.1179**    .1556**    .0050     -.0810**    .3785**   -.1081**    .1796**   -.0776**
IIIB8      -.0535**   -.0092      .1033**   -.1141**    .0318*    -.1129**   -.0852**    .1182**   -.0143      .1122**    .0475**
IIIB9      -.2724**   -.0120      .0975**   -.1511**    .1599**   -.0737**   -.1034**    .2858**   -.1306**    .2796**   -.1167**
IIIB10     -.0637**    .0341*     .0887**   -.0239      .1390**   -.0583**    .0105      .1571**    .0133      .1348**    .0397*
IIIB11     -.0195      .0748**    .1032**   -.0304      .0612**   -.0730**   -.0568**    .1341**   -.0126      .0575**    .0452**
IIIB12     -.0385*     .0021      .0934**   -.0464**    .1129**   -.0829**   -.0674**    .1279**   -.1202**    .1143**   -.0315*
IIIB13     -.0806**    .0460**    .0712**   -.0508**    .1760**   -.0248     -.0209      .1413**   -.0870**    .1090**   -.0087
IIIB14     -.0023      .0498**    .0334*     .0046      .0697**    .0497**   -.0083      .0369*    -.0324*     .0066      .0970**
IIIB15     -.0119      .0308      .0489**   -.0122      .1166**    .0981**    .0079      .1515**   -.0608**    .0828**    .0004
IIIB16     -.1692**   -.0498**    .1370**   -.1422**    .6491**   -.1063**   -.0839**    .2260**   -.2854**    .2041**   -.0613**
IIIB17      .0620**    .0934**    .0565**    .0946**    .0202      .0678**    .0753**    .0114     -.0170     -.0613**    .0304*
IIIC1       .0218      .0227      .0104      .0107     -.0139     -.0014      .0147      .0329*     .0337*     .0469**   -.0033
IIIC2       .0338*     .0426**   -.0131      .0470**   -.0660**   -.0173      .0590**   -.0696**    .0586**   -.0907**    .0254
IIIC3       .0053      .0012      .0787**   -.0361*     .0425**    .0770**   -.0733**    .0715**   -.0342*     .0435**   -.0035
IIIC4       .0041      .0178      .1128**   -.0156      .0119      .0477**   -.0590**    .0122      .0141      .0420**    .0215
IIIC5      -.0435**   -.0405*     .0647**   -.0762**    .0344*     .0364*    -.0539**    .0425**   -.0300*     .0926**   -.0168
IIIC6      -.0535**   -.0342*     .1129**   -.0616**    .0356*     .0528**   -.0758**    .0427**    .0032      .0680**    .0012
IIIC7      -.0967**    .0130      .0431**   -.1077**    .5174**   -.0551**   -.0445**    .1681**   -.2319**    .1341**   -.0062
IIIC8      -.0427**    .0470**    .0389*    -.0200      .1299**   -.0165     -.0183      .0660**   -.0654**    .0369*     .0217
IIIC9      -.0185      .0196      .0395*     .0030      .0808**    .0631**   -.0334*     .1027**   -.0591**    .0697**    .0025

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)           " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH                                  Page  15
12:20:37    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                        - -  Correlation Coefficients  - -

              A20        A21        A22      - A23        A24        A25        A26        A27        A28        B1         B2

SEXIND        .0101      .0195     -.1521**   -.1238**    .0518**    .0680**   -.0022     -.0125      .0045     -.0540**   -.0054
RACEIND      -.0704**    .1301**   -.0183      .0206     -.1306**   -.1197**   -.0681**    .0131      .0302      .0762**    .0254
CHANGIND     -.0227      .1058**   -.1661**   -.0024     -.0290     -.0645**   -.0675**    .0355*     .0295      .0353*     .0197
A1           -.0585**    .2342**   -.1831**    .0956**   -.1604**   -.1764**   -.1955**    .1109**    .1622**    .1734**    .1421**
A2            .1654**   -.0623**    .0064     -.0988**    .3029**    .1308**    .0558**   -.0834**   -.2752**   -.0991**   -.1199**
A3           -.2678**    .1530**   -.0811**    .3529**   -.2906**   -.2120**   -.0062      .2792**    .2000**    .1635**    .1735**
A4            .1581**   -.0961**    .0597**   -.0406*     .1876**    .1190**    .1171**   -.0123     -.0803**   -.0002     -.0532**
A5            .0969**   -.2826**    .2922**   -.0614**    .1816**    .1496**    .2215**   -.0911**   -.1232**   -.1145**   -.1574**
A6            .1057**   -.1417**    .1205**    .0329*     .1528**    .0892**    .3130**   -.0156     -.0033      .0244     -.0508**
A7           -.0541**    .1538**   -.2457**    .1543**   -.1468**   -.1339**   -.1053**    .0960**    .1228**    .1322**    .0820**
A8            .0808**   -.0879**    .1256**   -.0523**    .0891**    .0412**    .0746**   -.0167     -.0098     -.0428**   -.1306**
A9            .1020**   -.2176**    .1426**   -.1473**    .1698**    .1594**    .1430**   -.0846**   -.1170**   -.1688**   -.1612**
A10           .2580**   -.0736**    .0106     -.0407*     .1805**    .1083**    .0514**   -.0444**   -.0207      .0569**   -.0210
A11          -.1480**    .1245**   -.1534**    .3248**   -.1810**   -.2517**   -.0370*     .1763**    .0908**    .2059**    .1631**
A12           .1829**   -.1945**    .1223**   -.1795**    .3504**    .1654**    .2234**   -.0954**   -.2656**   -.1736**   -.2162**
A13          -.0590**    .7456**   -.1698**    .1135**   -.2773**   -.1364**   -.0818**    .0788**    .0775**    .1173**    .2088**
A14           .0202     -.0905**    .0605**   -.0606**    .0770**    .0216      .1430**    .0086     -.0052     -.0061     -.0150
A15           .1688**   -.2055**    .0559**   -.2391**    .4588**    .2591**    .1988**   -.0974**   -.4232**   -.2683**   -.2764**
A16          -.0929**    .3251**   -.3503**    .1208**   -.1342**   -.1095**   -.0862**    .0864**    .0990**    .1430**    .1334**
A17           .1396**   -.3756**    .0803**   -.1623**    .4548**    .1651**    .0676**   -.1804**   -.1508**   -.1125**   -.2235**
A18          -.1376**    .2606**   -.1953**    .1396**   -.2078**   -.1805**   -.1961**    .1180**    .1572**    .2099**    .2137**
A19           .1509**   -.1033**    .1229**    .0126      .2084**    .1327**    .1434**   -.0199     -.1150**   -.0308     -.1016**
A20          1.0000     -.0750**    .1080**   -.1548**    .2155**    .2151**    .0490**   -.1268**   -.1033**   -.1074**   -.0707**
A21          -.0750**   1.0000     -.1704**    .1777**   -.3489**   -.1745**   -.1106**    .1084**    .1694**    .1949**    .3297**
A22           .1080**   -.1704**   1.0000     -.0966**    .1042**    .1187**    .1750**   -.0774**   -.0565**   -.1574**   -.1000**
A23          -.1548**    .1777**   -.0966**   1.0000     -.2766**   -.2217**   -.0276      .2089**    .2305**    .3092**    .2271**
A24           .2155**   -.3489**    .1042**   -.2766**   1.0000      .3754**    .1399**   -.2189**   -.3178**   -.2310**   -.3361**
A25           .2151**   -.1745**    .1187**   -.2217**    .3754**   1.0000      .1727**   -.1430**   -.2306**   -.2047**   -.1942**
A26           .0490**   -.1106**    .1750**   -.0276      .1399**    .1727**   1.0000     -.0412**   -.0899**   -.0884**   -.0637**
A27          -.1268**    .1084**   -.0774**    .2089**   -.2189**   -.1430**   -.0412**   1.0000      .1623**    .1419**    .1611**
A28          -.1033**    .1694**   -.0565**    .2305**   -.3178**   -.2306**   -.0899**    .1623**   1.0000      .2850**    .2263**
B1           -.1074**    .1949**   -.1574**    .3092**   -.2310**   -.2047**   -.0884**    .1419**    .2850**   1.0000      .3323**
B2           -.0707**    .3297**   -.1000**    .2271**   -.3361**   -.1942**   -.0637**    .1611**    .2263**    .3323**   1.0000
B3           -.0546**    .0633**   -.0616**    .1468**   -.1282**   -.1092**   -.0608**    .0587**    .1661**    .2660**    .2369**
B4           -.1307**    .1953**   -.1031**    .2413**   -.2994**   -.2230**   -.0703**    .1109**    .4320**    .4072**    .2738**
B5           -.0989**    .0752**   -.1159**    .3688**   -.1775**   -.1734**   -.0486**    .1601**    .1973**    .3943**    .2524**
B6           -.1092**    .2189**   -.0907**    .1795**   -.3432**   -.2324**   -.1582**    .1500**    .2859**    .2306**    .2313**
B7           -.1931**    .2633**   -.1208**    .2197**   -.3866**   -.2330**   -.1493**    .1247**    .3338**    .3199**    .2862**
B8           -.1911**    .3373**   -.0733**    .1717**   -.5359**   -.2418**   -.1034**    .1709**    .2982**    .1623**    .2901**
B9           -.0998**    .0850**   -.1070**    .0664**   -.0753**   -.1051**   -.0955**    .0615**    .1586**    .2785**    .2243**
B10          -.1495**    .2041**   -.0737**    .1584**   -.3030**   -.1837**   -.1340**    .0908**    .2161**    .2511**    .2876**
B11          -.1251**    .2443**   -.1346**    .1223**   -.2815**   -.1452**   -.1117**    .1020**    .2169**    .2718**    .2526**
B12          -.1340**    .1115**   -.0620**    .1235**   -.2377**   -.1596**   -.1055**    .1299**    .2310**    .2283**    .2599**
B13          -.1268**    .2044**   -.1174**    .1185**   -.2089**   -.1558**   -.0682**    .1086**    .1886**    .2261**    .2187**
B14          -.1308**    .3274**   -.0830**    .2239**   -.4877**   -.2465**   -.1373**    .1924**    .3364**    .3018**    .3613**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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- - Correlation Coefficients - -

	A20	A21	A22	A23	A24	A25	A26	A27	A28	B1	B2
B15	-.1886**	.3105**	-.0906**	.2212**	-.5409**	-.2908**	-.1376**	.2221**	.3012**	.2501**	.3308**
C1	-.0233	.0401*	-.0842**	-.0409**	.0074	.0079	-.0403*	-.0069	-.0620**	.0061	.0389*
C2	-.0269	.1617**	-.2219**	.0251	-.0607**	-.0877**	-.1050**	.0586**	.0906**	.0838**	.0636**
C3	.0132	.1472**	-.0498**	.0248	-.0679**	-.0639**	-.0943**	.0400*	-.0047	.0191	.0943**
C4	-.0045	.075[illegible]**	-.0408**	-.0277	-.0251	-.0396*	-.0698**	-.0123	.0176	-.0229	.0065
C5	-.0297	.0584**	-.0101	-.0751**	-.0102	.0311*	-.0239	-.0056	.0225	-.0353*	-.0031
C6	-.1158**	.1754**	-.0912**	-.0468**	-.0586**	-.0629**	-.1183**	.0115	.0191	-.0089	.0533**
C7	-.0238	.1586**	-.1956**	-.0761**	-.0169	-.0177	-.1375**	.0215	.0278	.0715**	.0381*
C8	-.0661**	.1235**	-.0495**	.0476**	-.1092**	-.0227	-.0779**	.0992**	.0429**	.0811**	.0911**
C9	.0118	.1184**	-.0228	.0801**	-.0838**	-.0410**	-.0251	.0966**	.0529**	.0664**	.0988**
C10	-.0273	.2079**	-.1336**	-.0675**	-.0336*	-.0186	-.1282**	.0487**	-.0347*	.0474**	.0953**
C11	.0371*	.0490**	-.0113	.0668**	-.0409**	-.0118	-.0211	.0045	-.0179	.0373*	.0465**
C12	-.1292**	.4132**	-.1339**	.0986**	-.3270**	-.1816**	-.1082**	.1543**	.1382**	.1547**	.2213**
C13	-.1264**	.1421**	-.1681**	.2429**	-.1524**	-.1600**	-.0573**	.2283**	.1225**	.1820**	.1717**
IIA1	-.0348*	.0001	.2053**	.0251	-.0661**	-.0580**	.0369*	-.0449**	.0544**	-.0063	-.0402*
IIA2	-.0221	.0584**	-.0518**	.0513**	-.0794**	-.0296	-.0309*	-.0330*	.0595**	.0235	.0490**
IIB1	-.0040	-.0543**	.0001	.0353*	-.0253	-.0167	.0008	.0615**	-.0028	.0270	.0248
IIB2	.0585**	-.0736**	.2004**	.0245	-.0187	-.0069	.0444**	.0360*	.0305	.0445**	.0136
IIB3	.0255	.0213	-.0675**	-.0136	.0435**	.0791**	-.0417**	-.0304	-.0395*	.0004	.0005
IIB4	.0470**	.0591**	-.0098	.0145	-.0350*	-.0093	-.0275	.0460**	.0556**	.0058	.0539**
IIB5	.0566**	.0097	-.0208	-.0772**	.0510**	.0368*	-.0409**	-.0360*	-.0411**	-.0618**	-.0105
IIC1	.0412**	-.1324**	.3085**	-.0167	-.0335*	-.0373*	.0906**	-.0322*	.0418**	-.1131**	-.0594**
IIC2	.0148	-.0083	.0900**	-.0492**	-.0420**	-.0073	.0743**	-.0992**	.0328*	-.0712**	-.0689**
IIC3	.0186	-.0199	.0038	-.1019**	.0722**	.0657**	-.0168	-.1080**	-.0371*	-.0723**	-.0220
IIC4	-.0371*	.0687**	-.0583**	.0191	-.0431**	.0147	-.0333*	-.0185	.0578**	.0029	-.0091
IIC5	-.0705**	.0195	-.0337*	.0852**	-.0750**	-.0110	-.0663**	-.0142	.0259	.0167	.0562**
IIC6	-.0236	.0040	.0475**	.0034	-.0199	.0406*	.0302	-.0656**	.0236	-.0444**	-.0650**
IIC7	-.0232	-.0165	.0422**	-.0571**	.0053	.0243	.0070	-.0695**	.0176	-.0601**	-.0335*
IIC8	.0174	.0298	.0251	-.0283	.0009	.0220	-.0271	-.0882**	-.0288	-.0469**	.0237
IIC9	-.0231	-.0216	-.0219	-.1092**	.1039**	.1015**	.0443**	-.0728**	-.0933**	-.1908**	-.1176**
IIC10	-.0351*	.0545**	-.1795**	-.0216	.0220	.0367*	-.1011**	-.0088	-.0613**	.0228	.0152
IIC11	-.0364*	.0570**	-.1218**	-.0682**	-.0014	.0697**	-.0343*	-.0145	-.0539**	.0143	.0270
IIC12	.0159	-.0010	-.0761**	-.0590**	.0604**	.0314	.0134	-.0237	-.0367*	-.0812**	-.0411*
IID1	.0038	-.0926**	-.0028	-.0460**	.0753**	.0427**	-.0001	-.0539**	-.0736**	-.0721**	-.0625**
IID2	.0074	-.1297**	.1504**	.0140	.0417**	.0170	.0537**	.0029	-.0513**	.0029	-.0388*
IID3	-.0061	-.1098**	.1575**	-.0363*	.0581**	.0355*	.0192	.0543**	-.0172	-.0230	-.0678**
IID4	.0563**	-.0556**	.1486**	-.0715**	.0493**	.1108**	.0093	-.0273	-.0463**	-.0465**	-.0096
IID5	.0140	-.1007**	.1762**	-.0504**	.0570**	.0650**	.0429**	-.0159	-.0307	-.0782**	-.0682**
IID6	.0131	-.0730**	.1364**	-.0054	.0539**	.0679**	.0629**	-.0570**	-.0787**	-.0370*	-.0537**
IID7	-.0132	.0158	-.0577**	-.0327*	.0747**	.0656**	.0560**	-.0474**	-.0543**	-.0471**	-.0728**
IID8	.0046	-.0496**	.0205	-.0572**	.0365*	.0325*	.0573**	-.0589**	-.0463**	-.0310	-.0398*
IID9	.0319*	-.0339*	.0974**	.0193	-.0197	-.0878**	.0334*	[illegible]	.0288	.0300	-.0004
IID10	.0014	.0157	.1528**	-.0032	-.0795**	-.0720**	-.0041	[illegible]	.0616**	-.0098	-.0145
IID11	-.0243	-.0828**	-.0431**	-.0666**	.0916**	.0540**	.0007	[illegible]	-.0972**	-.0410**	-.1132**
IID12	-.0247	-.0937**	.0515**	-.0327*	-.0089	.0145	[illegible]	-.0086	-.0247	-.0167	-.0628**

* - Signif. LE .05 ** - Signif. LE .01 (2-tailed) " . " printed if a coefficient cannot be computed

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15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH                                    Page  17
12:20:37    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                        - -  Correlation Coefficients  - -

            A20         A21         A22         A23         A24         A25         A26         A27         A28         B1          B2

IID13      -.0563**     .0024      -.0393*      .0193      -.0113      -.0496**     .0066      -.0737**     .0324*      .0156      -.0453**
IID14      -.0586**    -.1019**     .0760**    -.0342*      .0626**     .0138       .0169      -.0499**    -.0434**    -.0224      -.0772**
IID15      -.0070      -.0921**     .0751**    -.0553**     .0868**     .0486**     .0073      -.0034      -.0295      -.0598**    -.0874**
IID16      -.0180      -.0069       .0516**    -.0635**     .0112       .0183       .0270       .0368*     -.0039      -.0321*     -.0249
IID17       .0788**    -.0879**     .1475**     .0261      -.0127      -.0700**     .0211       .0211       .0441**     .0075      -.0352*
IID18      -.0032      -.0706**     .1321**     .0382*     -.0192      -.0156       .0770**     .0000       .0273      -.0192      -.0268
IID19       .0346*     -.0104       .0481**    -.0577**     .0188       .0261       .0283      -.1072**    -.0054      -.0730**    -.0976**
IID20      -.0188      -.0596**     .0881**     .0050       .0272       .0327*      .0763**     .0213      -.0471**     .0211      -.0031
IID21       .0280      -.1043**     .1909**    -.0159       .1173**     .0961**     .0440**    -.0754**    -.0885**    -.0466**    -.0729**
IID22       .0515**    -.0688**     .2353**    -.0183       .0035      -.0090       .0639**    -.0579**     .0204      -.0551**    -.0403*
IIIB1      -.0379*      .0465**    -.0537**     .0264      -.0676**    -.0076      -.0417**    -.0010      -.0072       .0475**     .0605**
IIIB2      -.0332*      .0004       .0624**     .0445**    -.0852**    -.0434**     .0199       .0827**     .0470**     .0212       .0350*
IIIB3       .0974**    -.1390**     .1783**    -.0977**     .1761**     .1480**     .0838**    -.0794**    -.0531**    -.1075**    -.0976**
IIIB4      -.0731**     .0333*     -.1369**     .0245      -.0191       .0162      -.0121      -.0063      -.0566**     .0554*      .0588**
IIIB5      -.0798**     .1314**    -.2641**     .0976**    -.0871**    -.0735**    -.0889**     .0168       .0358*      .1412**     .0276
IIIB6       .0445**    -.0724**     .0671**    -.0683**     .1230**     .0568**     .0526**    -.0685**    -.0787**    -.0583**    -.1059**
IIIB7      -.1117**     .1632**    -.1847**     .1731**    -.1640**    -.1348**    -.0601**     .1020**     .1033**     .1600**     .1328**
IIIB8      -.0418**     .0508**    -.0803**     .1013**    -.0440**    -.0327*     -.0650**     .0581**     .0345*      .0810**     .0913**
IIIB9      -.0650**     .1869**    -.1794**     .1266**    -.1545**    -.1234**    -.1178**     .0888**     .0973**     .1704**     .1396**
IIIB10     -.0813**     .1066**    -.2704**     .0231       .0084       .0267      -.0176      -.0007      -.0443**     .0532**     .0807**
IIIB11     -.0424**     .0556**    -.1429**     .0842**    -.0177      -.0160      -.0292       .0520**    -.0099       .0796**     .0872**
IIIB12     -.0191       .1075**    -.1482**     .1100**    -.0901**    -.0703**    -.0173       .0537**     .0169       .0527**     .1229**
IIIB13     -.0154       .1577**    -.0831**     .0756**    -.0599**    -.1101**    -.0058       .0435**     .0607**     .1121**     .1021**
IIIB14      .0795**     .0653**     .0215       .0156      -.0195       .0444**     .0076       .0148       .0081       .0141       .0222
IIIB15     -.0156       .1229**    -.1233**     .0485**    -.0466**    -.0351*     -.0344*      .0068       .0277       .0575**     .0379*
IIIB16     -.0192       .5865**    -.1557**     .1274**    -.2245**    -.1267**    -.0757**     .0816**     .0845**     .1614**     .2816**
IIIB17      .0853**     .0012      -.0207      -.0206       .066[illegible]**     .0619**     .0453**    -.0043      -.0202       .0509**     .0305
IIIC1      -.0344*     -.0151      -.0295      -.0204       .0671**    -.0120      -.0217      -.0121      -.0153       .0645**     .0004
IIIC2       .0443**    -.0582**     .0114       .0104       .0595**     .0377*     -.0007      -.0304      -.0380*     -.0249      -.0355*
IIIC3      -.0250       .0518**     .0137       .0742**    -.0695**    -.0489**    -.0055       .0318*      .0721**     .0539**     .0531**
IIIC4      -.0480**     .0304      -.0353*      .0279      -.0574**    -.0753**    -.0199       .0425**     .0418**     .0616**     .0600**
IIIC5      -.0708**     .0382*     -.0171       .0594**    -.0744**    -.0949**    -.0016       .0322*      .0831**     .0468**     .0517**
IIIC6      -.0569**     .0383*     -.0463**     .0430**    -.0738**    -.1047**    -.0474**     .0510**     .0608**     .0701**     .0652**
IIIC7      -.0010       .4434**    -.0951**     .0750**    -.1285**    -.0687**    -.0923**     .0373*     -.0021       .0957**     .1419**
IIIC8       .0384*      .0996**    -.0354*      .0390*      .0333*     -.0483**    -.0266       .0198       .0437**     .0231       .0270
IIIC9      -.0050       .0897**    -.0758**     .0598**    -.0099      -.0190      -.0566**    -.0011       .0290       .0142       .0276

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91 CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH
12:20:38 SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

- - Correlation Coefficients - -

	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13
SEXIND	.0029	-.0068	-.0420**	-.0529**	-.0358*	-.0229	.0761**	.0260	.0233	.0066	-.0445**
RACEIND	.0368*	.0934**	.0420**	.1022**	.0857**	.1098**	.0388*	.0453**	.0890**	.0502**	.0244
CHANGIND	.0063	.0498**	.0293	.0233	.0700**	.0056	-.0069	.0184	.0263	.0576**	.0500**
A1	.0594**	.0979**	.0503**	.1787**	.2356**	.1457**	.0929**	.1059**	.1219**	.1216**	.0767**
A2	-.0947**	-.1788**	-.1002**	-.1625**	-.2171**	-.2957**	-.0047	-.1119**	-.0973**	-.1013**	-.0820**
A3	.0561**	.0948**	.1888**	.2492**	.2274**	.2187**	.0760**	.2120**	.1357**	.1212**	.1190**
A4	-.0119	-.0817**	.0226	-.1997**	-.1626**	-.1751**	-.0293	-.1739**	-.1258**	-.0749**	.0015
A5	-.0587**	-.1536**	-.0852**	-.1591**	-.2057**	-.1811**	-.0927**	-.1356**	-.1371**	-.1445**	-.0829**
A6	-.0048	-.0330*	.0996**	-.1235**	-.1439**	-.1475**	-.0558**	-.1494**	-.0897**	-.0978**	-.0335*
A7	.1678**	.0840**	.0936**	.1166**	.1466**	.1034**	.0005	.0861**	.1284**	.0737**	.1505**
A8	-.0611**	-.0261	-.0733**	-.0910**	-.0689**	-.0799**	-.0729**	-.1043**	-.0644**	-.0134	-.0339*
A9	-.0533**	-.1231**	-.0763**	-.1464**	-.2133**	-.1811**	-.0965**	-.1505**	-.1032**	-.1331**	-.1180**
A10	.0616**	-.0485**	.0697**	-.1106**	-.0432**	-.2101**	-.0029	-.1746**	-.0970**	-.0709**	-.0485**
A11	.0413**	.0786**	.1759**	.1773**	.1421**	.1434**	.1042**	.1176**	.1012**	.0747**	.0813**
A12	-.0957**	-.2075**	-.1197**	-.3270**	-.3048**	-.3026**	-.1055**	-.2503**	-.2030**	-.2020**	-.1305**
A13	-.0114	.1318**	.0460**	.1207**	.1852**	.3144**	.0796**	.1445**	.2228**	.0680**	.2143**
A14	.0244	.0333*	.0502**	-.0785**	-.0659**	-.0993**	-.0455**	-.0663**	-.0064	-.0332*	.0423**
A15	-.1873**	-.3791**	-.1993**	-.3816**	-.4345**	-.3293**	-.1643**	-.2682**	-.1756**	-.2630**	-.0972**
A16	.1019**	.0906**	.1033**	.0955**	.1441**	.1086**	.0789**	.1157**	.1390**	.1029**	.1257**
A17	.0067	-.1007**	-.0684**	-.1789**	-.2155**	-.4696**	.0369*	-.1748**	-.2140**	-.0742**	-.0923**
A18	.1093**	.1629**	.1567**	.2321**	.2428**	.2160**	.1176**	.1300**	.1522**	.1672**	.1183**
A19	-.0678**	-.0953**	-.0147	-.1766**	-.1898**	-.1497**	-.1224**	-.2025**	-.1067**	-.1227**	-.0047
A20	-.0546**	-.1307**	-.0989**	-.1892**	-.1931**	-.1911**	-.0998**	-.1495**	-.1251**	-.1340**	-.1260**
A21	.0633**	.1953**	.0752**	.2189**	.2633**	.3373**	.0850**	.2041**	.2443**	.1115**	.2044**
A22	-.0616**	-.1031**	-.1159**	-.0907**	-.1208**	-.0733**	-.1070**	-.0737**	-.1346**	-.0620**	-.1174**
A23	.1468**	.2413**	.3688**	.1795**	.2197**	.1717**	.0664**	.1584**	.1223**	.1235**	.1185**
A24	-.1282**	-.2994**	-.1775**	-.3432**	-.3866**	-.5359**	-.0753**	-.3030**	-.2815**	-.2377**	-.2089**
A25	-.1092**	-.2230**	-.1734**	-.2324**	-.2330**	-.2418**	-.1051**	-.1837**	-.1452**	-.1596**	-.1558**
A26	-.0608**	-.0703**	-.0486**	-.1582**	-.1493**	-.1034**	-.0955**	-.1340**	-.1117**	-.1055**	-.0602**
A27	.0587**	.1109**	.1601**	.1500**	.1247**	.1709**	.0615**	.0908**	.1020**	.1299**	.1086**
A28	.1661**	.4328**	.1973**	.2859**	.3338**	.2902**	.1586**	.2161**	.2169**	.2310**	.1806**
B1	.2660**	.4072**	.3943**	.2386**	.3199**	.1623**	.2785**	.2511**	.2718**	.2283**	.2261**
B2	.2369**	.2738**	.2524**	.2313**	.2862**	.2901**	.2243**	.2876**	.2526**	.2599**	.2187**
B3	1.0000	.2822**	.2556**	.1513**	.2511**	.0872**	.3016**	.1946**	.2600**	.1812**	.2063**
B4	.2822**	1.0000	.3550**	.3329**	.4021**	.2319**	.2751**	.2413**	.3219**	.3313**	.2785**
B5	.2556**	.3550**	1.0000	.2852**	.2890**	.1382**	.2205**	.2206**	.2088**	.2090**	.2017**
B6	.1513**	.3329**	.2852**	1.0000	.5525**	.3387**	.1706**	.3105**	.2305**	.2835**	.1332**
B7	.2511**	.4021**	.2890**	.5525**	1.0000	.3762**	.2709**	.3797**	.2992**	.3332**	.2175**
B8	.0872**	.2319**	.1382**	.3387**	.3762**	1.0000	.1340**	.2991**	.2768**	.2698**	.2094**
B9	.3016**	.2751**	.2205**	.1706**	.2709**	.1340**	1.0000	.4354**	.2896**	.2487**	.1826**
B10	.1946**	.2413**	.2206**	.3105**	.3797**	.2991**	.4354**	1.0000	.4603**	.2725**	.2049**
B11	.2600**	.3219**	.2088**	.2305**	.2992**	.2768**	.2896**	.4603**	1.0000	.3333**	.5054**
B12	.1812**	.3313**	.2090**	.2835**	.3332**	.2698**	.2487**	.2725**	.3333**	1.0000	.3050**
B13	.2063**	.2785**	.2017**	.1332**	.2175**	.2094**	.1826**	.2049**	.5054**	.3050**	1.0000
B14	.1801**	.3314**	.2332**	.4090**	.4048**	.3856**	.1610**	.3272**	.3825**	.3402**	.3662**

* - Signif. LE .05   ** - Signif. LE .01   (2-tailed)   " . " printed if a coefficient cannot be computed

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                      - -  Correlation Coefficients  - -

            B3         B4         B5         B6         B7         B8         B9         B10        B11        B12        B13

B15        .1496**    .3565**    .1771**    .3934**    .4548**    .5777**    .1830**    .3366**    .3205**    .3211**    .2264**
C1        -.0197     -.0322*    -.0260      .0385*     .0014      .0245      .0640**    .0387*     .0133      .0336*    -.0349*
C2         .1234**    .0301      .0864**    .0620**    .1241**    .0864**    .0573**    .1195**    .1507**    .0466**    .1879**
C3         .0200      .0130     -.0152      .1571**    .0959**    .0966**    .0747**    .0932**    .0587**    .0505**   -.0053
C4         .0216      .0497**    .0002      .0725**    .0322*     .0464**    .0025      .0660**    .1045**   -.0106      .0516**
C5         .0222      .0116      .0098      .0739**    .0381*     .0415**    .0241      .0082      .0667**    .0016      .0252
C6        -.0127     -.0200     -.0413**    .1878**    .1342**    .1185**    .1015**    .1183**    .1103**    .0904**    .0263
C7         .0067      .0039     -.0269      .0717**    .1083**    .1123**    .1227**    .0818**    .0960**    .0550**    .0058
C8         .0502**    .0448**    .0499**    .1375**    .1384**    .0785**    .1136**    .1170**    .0757**    .0045**   -.0085
C9         .0184      .0329*     .0570**    .1395**    .0815**    .0754**    .0731**    .0432**    .0093      .0793**   -.0277
C10        .0310     -.0282     -.0103      .0872**    .0659**    .0875**    .0838**    .1060**    .1178**    .0208      .0203
C11        .0049      .0212      .0233      .0355*     .0387*     .0247      .0444**    .0169      .0129      .0305     -.0265
C12        .0267      .1254**    .0688**    .2034**    .2520**    .3689**    .0997**    .2516**    .2515**    .1151**    .1363**
C13        .0384*     .0728**    .1387**    .0964**    .1266**    .1652**    .1059**    .1438**    .1168**    .0722**    .0935**
IIA1      -.0573**    .0187     -.0860**    .0293      .0591**    .0133     -.0590**   -.0141     -.0080      .0152      .0046
IIA2       .0360*     .0425**    .0081      .0595**    .0766**    .0647**    .0145      .0798**    .0460**    .0030      .0156
IIB1      -.0104     -.0221      .0267      .0629**    .0125     -.0266     -.0468**   -.0504**   -.0449**    .0069     -.0215
IIB2       .0358*     .0024      .0699**    .0388*     .0207      .0150     -.0201     -.0197     -.0142      .0340*     .0000
IIB3      -.0428**   -.0564**   -.0538**   -.0189     -.0502**    .0131      .0554**   -.0183     -.0372*    -.0065     -.1034**
IIB4      -.0214      .0120      .0162      .0572**    .0689**    .0519**    .0125      .0064      .0210      .0087     -.0335*
IIB5       .0003     -.0709**   -.0312*     .0046     -.0335*    -.0499**    .0270     -.0487**   -.0414**   -.0469**   -.0185
IIC1      -.0285     -.0410**   -.0544**   -.0459**   -.0484**   -.0019     -.1042**   -.0272     -.0760**   -.0349*    -.0272
IIC2      -.0521**   -.0213     -.0926**    .0160      .0205      .0374*    -.0656**    .0044     -.0134     -.0072     -.0230
IIC3      -.0265     -.0225     -.0365*    -.0620**   -.0505**   -.0615**   -.0110     -.0213     -.0090     -.0761**   -.0244
IIC4      -.0249      .0308     -.0070      .0391*     .0556**    .0297     -.0160     -.0081      .0386*    -.0309     -.0055
IIC5      -.0310      .0339*     .0625**    .0767**    .0627**    .0366*     .0023      .0099     -.0156      .0368*    -.0457**
IIC6      -.0837**   -.0061     -.0591**   -.0004      .0394*     .0435**   -.0442**   -.0126      .0093     -.0392*    -.0467**
IIC7      -.0419**    .0124     -.0825**   -.0019     -.0425**    .0203     -.0213     -.0132     -.0008     -.0459**    .0120
IIC8      -.0010     -.0327*    -.0406*    -.0339*    -.0348*    -.0134     -.0343*    -.0323*    -.0586**   -.0522**   -.0393*
IIC9      -.1253**   -.0753**   -.1115**   -.0972**   -.1094**   -.0532**   -.0609**   -.1102**   -.0727**   -.1016**   -.1025**
IIC10     -.0035     -.0273     -.0194      .0054      .0178     -.0125      .0365*    -.0189      .0173     -.0068     -.0059
IIC11     -.0037     -.0442**   -.0187     -.0260      .0112      .0139      .0531**    .0120      .0039      .0173     -.0117
IIC12     -.0685**   -.0643**   -.0570**   -.0506**   -.0675**    .0056      .0102     -.0462**   -.0522**   -.0273     -.0535**
IID1      -.0514**   -.0480**   -.0028     -.0657**   -.1099**   -.0909**   -.0834**   -.0717**   -.0949**   -.0322*    -.0757**
IID2      -.0415**   -.0584**   -.0108     -.0430**   -.0814**   -.0512**   -.0927**   -.1066**   -.1499**   -.0192     -.1198**
IID3       .0045     -.0199     -.0017     -.0120     -.0143     -.0446**   -.0703**   -.0217     -.0764**   -.0140     -.0494**
IID4      -.0675**   -.0535**   -.0266     -.0282     -.0412**   -.0363*    -.0330*    -.0195     -.0825**   -.0156     -.1125**
IID5      -.0719**   -.1048**   -.0838**   -.0553**   -.0715**   -.0600**   -.0885**   -.0900**   -.1176**   -.0334*    -.1310**
IID6      -.0037     -.0461**   -.0245     -.0410**   -.0552**   -.0640**   -.0603**   -.0540**   -.0766**   -.0098     -.0158
IID7      -.0198     -.0312*    -.0237     -.0699**   -.0428**   -.0778**   -.0472**   -.0404*    -.0293     -.0332*     .0060
IID8      -.0367*    -.0706**   -.0710**   -.0738**   -.0881**   -.0903**   -.0832**   -.0380*    -.0840**   -.0696**   -.0919**
IID9       .0603**    .0402*     .0924**    .0047      .0305     -.0202     -.0862**   -.0059      .0285      .0136      .1022**
IID10     -.0011      .0435**    .0103      .0733**    .1056**    .0837**   -.0237      .0266      .0453**    .0509**    .0685**
IID11     -.0193     -.0476**   -.0598**   -.0392*    -.0528**   -.0635**    .0117      .0089     -.0139     -.0399*    -.0164
IID12     -.0463**   -.0382*    -.0231     -.0630**   -.0752**   -.0188     -.0665**   -.0189     -.0453**   -.0250     -.0395*

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH
12:20:38    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                     - -  Correlation Coefficients  - -

             B3         B4         B5         B6         B7         B8         B9         B10        B11        B12        B13

IID13       -.0423**    .0147     -.0493**    .0442**    .0627**   -.0332*    -.0091      .0000      .0024      .0141     -.0008
IID14       -.0774**   -.0565**   -.0771**   -.0773**   -.0564**   -.0810**   -.0487**   -.0679**   -.0893**   -.0155     -.1213**
IID15       -.0752**   -.0448**   -.0341*    -.0364*    -.0627**   -.0629**    .0008     -.0365*    -.0887**   -.0104     -.0870**
IID16       -.0354*    -.0073     -.0163     -.0099     -.0244     -.0040     -.0347*    -.0665**   -.0433**   -.0325*    -.0311
IID17        .0007      .0254      .0632**    .0332*     .0020      .0092     -.0729**   -.0663**   -.0020      .0414**    .0100
IID18        .0044     -.0102      .0190      .0199     -.0111     -.0063     -.0963**   -.0336*    -.0194      .0108     -.0077
IID19       -.0707**   -.0318*    -.1204**   -.0226     -.0223     -.0147     -.1263**   -.0961**   -.0811**   -.0653**   -.0601**
IID20       -.0435**   -.1030**   -.0200     -.0426**   -.0526**   -.0290     -.0713**   -.0995**   -.1130**   -.0235     -.1360**
IID21       -.0062     -.1233**   -.0920**   -.0950**   -.1345**   -.0866**   -.0016     -.0574**   -.1218**   -.0366*    -.1508**
IID22       -.0433**   -.0314*    -.0763**    .0006     -.0360*     .0008     -.0985**   -.0692**   -.1059**   -.0162     -.1110**
IIIB1        .0843**   -.0197      .0302*     .0830**    .0755**    .0671**    .0417**    .0848**    .0125     -.0161     -.0100
IIIB2        .0656**    .0228      .0489**    .0714**    .0247      .0306*     .0230      .0300     -.0386*    -.0019     -.0354*
IIIB3       -.0389*    -.1231**   -.1119**   -.0949**   -.1590**   -.0924**   -.0526**   -.0935**   -.1157**   -.1015**   -.0766**
IIIB4        .0709**   -.0115      .0505**    .0592**    .0580**    .0114      .0539**    .0251     -.0079      .0181      .0002
IIIB5        .0708**    .0720**    .0824**    .0723**    .1343**    .0527**    .0509**    .0814**    .1392**    .0925**    .1602**
IIIB6       -.0314*    -.0674**   -.0064     -.0290     -.0745**   -.1384**   -.0108     -.0694**   -.0545**   -.0664**   -.0790**
IIIB7        .1054**    .1010**    .1418**    .1404**    .1910**    .1129**    .0751**    .0914**    .1132**    .1094**    .1262**
IIIB8        .1037**    .0429**    .0952**    .0923**    .0866**    .0064      .1063**    .0362*     .0574**    .0835**    .0808**
IIIB9        .1035**    .0974**    .1264**    .1264**    .2027**    .1376**    .0739**    .1321**    .1119**    .0945**    .0731**
IIIB10      -.0033      .0214      .0423**    .0564**    .0481**    .0071      .1001**    .0279      .0752**    .0597**    .0772**
IIIB11       .0331*     .0064      .0873**    .0700**    .0850**    .0360*     .0775**    .0088      .0132      .0724**    .0532**
IIIB12       .0624**    .0424**    .0662**    .0839**    .0578**    .0839**    .0387*     .0717**    .0541**    .0576**    .0664**
IIIB13       .0819**    .0736**    .0387*     .0517**    .1137**    .0667**    .0941**    .0687**    .0729**    .0573**    .1204**
IIIB14      -.0002     -.0235     -.0166     -.0011     -.0022     -.0242     -.0277     -.0313*    -.0651**   -.0220     -.0111
IIIB15       .0544**    .0460**    .0210      .0145      .0816**    .0225      .0173      .0384*     .0729**    .0079      .1386**
IIIB16       .0627**    .1135**    .0380*     .1144**    .1967**    .2670**    .1211**    .1503**    .2115**    .0579**    .1808**
IIIB17       .0563**    .0158      .0376*    -.0940**   -.0587**   -.0714**    .1021**    .0312*     .0252     -.0204      .0639**
IIIC1        .0516**    .0260      .0365*    -.0089      .0091     -.0229      .0961**    .0141      .0352*     .0559**    .0110
IIIC2       -.0070     -.0523**    .0060     -.0388*    -.0573**   -.0670**   -.0169     -.0233     -.0110      .0046     -.0247
IIIC3        .0146      .0522**    .0416**    .0530**    .0666**    .0499**    .0173      .0471**   -.0100      .0607**   -.0333*
IIIC4        .0966**    .0759**    .0804**    .1133**    .0698**    .0303      .0873**    .0957**    .0653**    .0748**    .0415**
IIIC5        .0148      .0253      .0727**    .0966**    .0856**    .0698**    .0308*     .0856**    .0086      .0136     -.0039
IIIC6        .0797**    .0636**    .0797**    .0831**    .0608**    .0404*     .0768**    .0908**    .0372*     .0448**    .0441**
IIIC7        .0371*     .0716**    .0052      .0127      .0721**    .1669**    .0162      .0496**    .1518**    .0178      .1246**
IIIC8        .0404*     .0157     -.0342*    -.0057      .0475**    .0084      .0386*     .0035     -.0195     -.0251      .0158
IIIC9        .0431**    .0639**   -.0047      .0048      .0480**    .0304      .0152     -.0023      .0277     -.0086      .0873**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)         " . " printed if a coefficient cannot be computed
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                    - -  Correlation Coefficients  - -

            B14         B15         C1          C2          C3          C4          C5          C6          C7          C8          C9

SEXIND      -.0097      -.0216       .1004**     .0688**    -.0909**    -.0196       .0209       .1280**     .2189**    -.0459**    -.1252**
RACEIND      .0674**     .1309**     .0069      -.0013       .0591**     .0498**     .0631**     .1363**     .0817**     .0169      -.0092
CHANGIND     .0544**     .0411**     .0269       .0496**     .0285      -.0188      -.0422**     .0314*      .0273       .0294      -.0236
A1           .1440**     .1936**     .0229       .1175**     .1432**    -.0145      -.0630**     .1286**     .1830**     .1792**     .1024**
A2          -.1809**    -.2464**     .0735**    -.0361*      .0473**     .0225      -.0230       .0559**     .0564**     .0055       .0162
A3           .2116**     .2642**     .0163       .0257       .0438**     .0254       .0320*      .0782**     .0058       .0457**     .0042
A4          -.1247**    -.1709**    -.0360*      .0139      -.0477**    -.1094**    -.0859**    -.1420**    -.0536**    -.0519**    -.0062
A5          -.1682**    -.2069**    -.0952**    -.1359**    -.1270**    -.0477**    -.0039      -.1564**    -.1584**    -.1290**    -.0821**
A6          -.1150**    -.1738**    -.1384**    -.0530**    -.0595**    -.0818**    -.0609**    -.2519**    -.1958**    -.0960**    -.0076
A7           .1016**     .0958**    -.0733**     .4446**    -.0163       .0454**    -.0001       .0075       .0671**     .0342*      .0351*
A8          -.0329*     -.0927**    -.0746**    -.0392*     -.0129       .0472**     .0024      -.1082**    -.0851**     .0127      -.0225
A9          -.1443**    -.2053**    -.0690**    -.1508**    -.1356**    -.0672**    -.0184      -.1496**    -.1388**    -.1253**    -.0520**
A10         -.0900**    -.1978**    -.0284       .0803**    -.0034      -.0680**    -.0194      -.0858**     .0131       .0377*      .0777**
A11          .1482**     .1719**     .0281       .1060**     .0846**     .0358*     -.0197       .0689**     .0129       .0875**     .0688**
A12         -.3083**    -.3361**    -.1120**    -.0476**    -.0768**    -.0156       .0051      -.1810**    -.1186**    -.0811**    -.0188
A13          .2568**     .2846**     .0907**     .1523**     .1320**     .0860**     .0935**     .1599**     .1638**     .1237**     .0928**
A14         -.0502**    -.0791**    -.2704**     .0597**    -.1237**    -.0045       .0301      -.0914**    -.1097**    -.1246**    -.0454**
A15         -.3428**    -.4172**     .0432**    -.0443**    -.0677**     .0121       .0056      -.0583**     .0006      -.0482**    -.0321*
A16          .1409**     .1268**     .1123**     .2694**     .1436**     .1092**     .0636**     .1539**     .2580**     .1617**     .0808**
A17         -.3372**    -.4181**     .0322*     -.1096**    -.1108**    -.0460**    -.0214      -.0263      -.0848**    -.1333**    -.1067**
A18          .2273**     .2169**     .0365*      .1280**     .1273**     .0344*     -.0168       .1107**     .1292**     .1129**     .0984**
A19         -.1502**    -.1850**    -.0153      -.0162      -.0548**    -.0411**    -.0036      -.1532**    -.0423**    -.0306      -.0724**
A20         -.1308**    -.1886**    -.0233      -.0269       .0132      -.0045      -.0297      -.1158**    -.0238      -.0661**     .0118
A21          .3274**     .3105**     .0401*      .1617**     .1472**     .0758**     .0584**     .1754**     .1586**     .1235**     .1184**
A22         -.0830**    -.0906**    -.0842**    -.2219**    -.0498**    -.0408**    -.0101      -.0912**    -.1956**    -.0495**    -.0228
A23          .2239**     .2212**    -.0409**     .0251       .0248      -.0277      -.0751**    -.0468**    -.0761**     .0476**     .0801**
A24         -.4077**    -.5409**     .0074      -.0607**    -.0679**    -.0251      -.0102      -.0586**    -.0169      -.1092**    -.0838**
A25         -.2465**    -.2908**     .0079      -.0877**    -.0639**    -.0396*      .0311*     -.0629**    -.0177      -.0227      -.0410**
A26         -.1373**    -.1376**    -.0403*     -.1050**    -.0943**    -.0698**    -.0239      -.1183**    -.1375**    -.0779**    -.0251
A27          .1924**     .2221**    -.0069       .0586**     .0400*     -.0123      -.0056       .0115       .0215       .0992**     .0966**
A28          .3364**     .3012**    -.0620**     .0906**    -.0047       .0176       .0225       .0191       .0278       .0429**     .0529**
B1           .3018**     .2501**     .0061       .0838**     .0191      -.0229      -.0353*     -.0089       .0715**     .0811**     .0664**
B2           .3613**     .3308**     .0389*      .0636**     .0943**     .0065      -.0031       .0533**     .0381*      .0911**     .0908**
B3           .1801**     .1496**    -.0197       .1234**     .0200       .0216       .0222      -.0127       .0067       .0502**     .0184
B4           .3314**     .3565**    -.0322*      .0301       .0130       .0497**     .0116      -.0200       .0039       .0448**     .0329*
B5           .2332**     .1771**    -.0260       .0864**    -.0152       .0002       .0098      -.0413**    -.0269       .0499**     .0570**
B6           .4090**     .3934**     .0385*      .0620**     .1571**     .0725**     .0739**     .1878**     .0717**     .1375**     .1395**
B7           .4048**     .4548**     .0014       .1241**     .0959**     .0322*      .0381*      .1342**     .1083**     .1384**     .0815**
B8           .3856**     .5777**     .0245       .0864**     .0966**     .0464**     .0415**     .1185**     .1123**     .0785**     .0754**
B9           .1610**     .1830**     .0640**     .0573**     .0747**     .0025       .0241       .1015**     .1227**     .1136**     .0731**
B10          .3272**     .3366**     .0387*      .1195**     .0932**     .0660**     .0082       .1183**     .0818**     .1170**     .0432**
B11          .3825**     .3205**     .0133       .1507**     .0587**     .1045**     .0667**     .1103**     .0960**     .0757**     .0093
B12          .3402**     .3211**     .0336*      .0466**     .0505**    -.0106       .0016       .0904**     .0550**     .0845**     .0793**
B13          .3662**     .2264**    -.0349*      .1879**    -.0053       .0516**     .0252       .0263       .0058      -.0085      -.0277
B14         1.0000       .5340**    -.0304       .1184**     .0747**     .0528**     .0659**     .0526**     .0430**     .1456**     .0720**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH                                          Page  22
12:20:38    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                            - -  Correlation Coefficients  - -

               B14        B15        C1         C2         C3         C4         C5         C6         C7         C8         C9

B15            .5340**   1.0000     -.0055      .0835**    .1203**    .0804**    .0506**    .1073**    .0850**    .1453**    .0922**
C1            -.0304     -.0055     1.0000      .0717**    .1988**    .0500**    .0359*     .3452**    .4260**    .2344**    .1463**
C2             .1184**    .0835**    .0717**   1.0000      .1706**    .1991**    .1789**    .1504**    .3082**    .2175**    .2092**
C3             .0747**    .1203**    .1988**    .1706**   1.0000      .2828**    .2298**    .3085**    .2227**    .4778**    .4946**
C4             .0528**    .0804**    .0500**    .1991**    .2828**   1.0000      .5857**    .2434**    .1937**    .1500**    .1226**
C5             .0659**    .0506**    .0359*     .1789**    .2298**    .5857**   1.0000      .1905**    .1605**    .2113**    .1972**
C6             .0526**    .1073**    .3452**    .1504**    .3085**    .2434**    .1905**   1.0000      .4556**    .1754**    .1146**
C7             .0430**    .0850**    .4260**    .3082**    .2227**    .1937**    .1605**    .4556**   1.0000      .3194**    .2004**
C8             .1456**    .1453**    .2344**    .2175**    .4778**    .1500**    .2113**    .1754**    .3194**   1.0000      .5438**
C9             .0720**    .0922**    .1463**    .2092**    .4946**    .1226**    .1972**    .1146**    .2004**    .5438**   1.0000
C10            .0470**    .0816**    .3834**    .1943**    .1916**    .1855**    .0990**    .4549**    .5018**    .2168**    .2256**
C11            .0628**    .0517**    .0237      .0793**    .5051**    .0443**    .0353*    -.0401*    -.0101      .4205**    .3415**
C12            .3298**    .3692**    .0579**    .2495**    .2513**    .1892**    .1334**    .1353**    .2000**    .2910**    .2236**
C13            .1964**    .2128**   -.0189      .2026**    .1506**    .0985**    .0488**   -.0088      .1337**    .1857**    .1898**
IIA1           .0327*     .0376*    -.1438**   -.1141**   -.0655**   -.0313*    -.0038     -.0839**   -.1838**   -.0691**   -.0764**
IIA2           .0407*     .0343*     .0259     -.0358*    -.0378*    -.0234     -.0485**   -.0086     -.0097     -.0424**   -.0573**
IIB1           .0620**   -.0031     -.1761**    .0821**   -.0186     -.0498**   -.0369*    -.0962**   -.1059**    .0079      .0628**
IIB2           .0461**    .0352*    -.0917**   -.1104**    .0652**    .0445**    .0533**   -.0800**   -.0831**    .0139      .0730**
IIB3          -.0781**   -.0173      .4329**   -.0731**   -.0035     -.2422**   -.2989**    .1153**    .1860**    .0443**   -.0179
IIB4           .0171      .0630**    .0744**    .0893**    .0349*    -.0457**   -.0749**    .0240      .0377*     .0894**    .1182**
IIB5          -.0172     -.0364*     .0813**    .1330**    .0667**   -.0360*    -.0491**    .0944**    .1116**    .0521**    .0973**
IIC1          -.0479**   -.0495**   -.1895**   -.1731**   -.0957**   -.0500**   -.0237     -.1070**   -.2688**   -.1306**   -.0463**
IIC2          -.0311      .0026      .0233     -.1483**   -.0732**    .0030     -.0096      .0319*    -.0648**   -.0964**   -.1355**
IIC3          -.0635**   -.0850**    .0235      .0160     -.0526**    .0238      .0245      .0368*     .0284     -.0481**   -.0460**
IIC4           .0078      .0075      .0211      .0137     -.0509**    .0168     -.0205      .0470**    .0222     -.0619**   -.0817**
IIC5          -.0041     -.0046      .0561**   -.1031**   -.1089**   -.0891**   -.0750**    .0040     -.0200     -.0664**   -.0349*
IIC6          -.0148      .0029     -.0131     -.1044**   -.1485**   -.0351*    -.0325*    -.0304     -.0192     -.1228**   -.1202**
IIC7           .0212     -.0070     -.0008     -.0682**   -.1137**   -.0109      .0397*     .0177      .0162     -.1263**   -.0869**
IIC8          -.0669**   -.0454**   -.0456**   -.0832**   -.1056**   -.1090**   -.0690**   -.0594**   -.0823**   -.0725**    .0048
IIC9          -.1251**   -.1043**    .0525**   -.1197**   -.1319**   -.0877**   -.0796**    .0180     -.0109     -.1451**   -.0839**
IIC10         -.0051     -.0075      .0664**    .0493**   -.0023     -.0058     -.0055     -.0031      .0821**    .0443**    .0111
IIC11         -.0288      .0417*     .0520**    .0160      .0139     -.0481**   -.0485**    .0288      .0688**    .0164      .0409*
IIC12         -.0287     -.0075      .0204     -.0209     -.0285     -.0745**   -.0519**   -.0037      .0421*     .0196      .0661**
IID1          -.0933**   -.0788**   -.0317*    -.0444**   -.0371*    -.0495**   -.0964**   -.0391*    -.0917**   -.0398*     .0126
IID2          -.1170**   -.0570**    .0296     -.1732**   -.1287**   -.2595**   -.3499**   -.0889**   -.1052**   -.0927**   -.0483**
IID3          -.0727**   -.0422**   -.1742**   -.0102     -.0803**    .0139      .0000     -.0784**   -.1083**   -.1000**   -.0271
IID4          -.0517**   -.0222      .1081**   -.2107**    .0369*    -.0053      .0363*     .0642**    .0199     -.0160      .0059
IID5          -.0768**   -.0563**    .0137     -.0903**   -.0537**   -.0597**   -.0213     -.0392*    -.0846**   -.0504**    .0084
IID6          -.0755**   -.0444**    .0338*    -.1647**   -.1234**   -.0167      .0064      .0262     -.0685**   -.1560**   -.1321**
IID7          -.0419**   -.0408*     .0894**    .0228     -.0268     -.0535**   -.0252      .0016      .0022      .0310*    -.0017
IID8          -.0632**   -.0797**    .0287     -.0297     -.0854**   -.0826**   -.0717**   -.0175     -.0825**   -.0175     -.0014
IID9           .0172     -.0264     -.4623**    .0924**   -.0872**    .0389*     .0519**   -.1652**   -.2225**   -.1455**   -.0297
IID10          .0705**    .0603**   -.1339**   -.1123**   -.0577**    .0374*     .0697**   -.0129     -.1531**   -.1009**   -.0413**
IID11         -.0703**   -.0292      .1224**   -.0376*    -.0059      .0243      .0497**    .0475**    .0976**   -.0375*    -.0924**
IID12         -.0452**   -.0411**   -.0456**   -.1383**   -.0603**   -.1499**   -.0597**   -.1434**   -.1966**   -.0678**   -.0617**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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                        - -  Correlation Coefficients  - -

            B14        B15        C1         C2         C3         C4         C5         C6         C7         C8         C9

IID13      -.0571**   -.0388*     .1239**   -.0328*    -.0095     -.0448**   -.0625**    .0833**   -.0348*    -.0247     -.0385*
IID14      -.0893**   -.0861**    .0761**   -.1303**   -.1107**   -.1045**   -.1420**   -.0366*    -.0970**   -.0799**   -.0697**
IID15      -.0826**   -.0503**    .0534**   -.1294**   -.0298     -.0509**   -.0494**    .0125     -.0176     -.0713**   -.0544**
IID16      -.0315*    -.0154      .0245     -.0651**    .0230      .0050     -.0240      .0175     -.0162     -.0678**   -.0149
IID17       .0195      .0244     -.0885**   -.0765**    .0306      .0062     -.0228     -.0637**   -.1606**   -.0708**    .0009
IID18      -.0429**   -.0368*    -.0708**   -.1266**   -.0503**   -.0126     -.0530**   -.0856**   -.2308**   -.0653**   -.0137
IID19      -.0479**   -.0128      .0096     -.1164**   -.0879**   -.0410**   -.0478**   -.0281     -.1139**   -.1040**   -.1295**
IID20      -.0794**   -.0463**    .0234     -.1471**   -.0874**   -.3939**   -.2513**   -.0710**   -.0531**   -.0080      .0564**
IID21      -.1321**   -.0935**    .1213**   -.1646**   -.0387*    -.1042**   -.0340*     .0006      .0135     -.0519**    .0048
IID22      -.0329*    -.0200     -.0680**   -.1938**   -.0545**   -.1014**   -.0950**   -.0955**   -.2401**   -.0923**   -.0268
IIIB1       .0225      .0750**    .0330*     .0211      .0343*     .0069      .0039      .0745**    .0886**    .0231      .0465**
IIIB2       .0563**    .0457**   -.0854**    .0308      .1089**    .0174      .0494**   -.0858**   -.0038      .0882**    .1528**
IIIB3      -.1023**   -.1363**   -.0182     -.0793**   -.0558**   -.0426**   -.0355*    -.0223     -.0635**   -.1310**   -.0643**
IIIB4      -.0058      .0693**    .0714**    .0487**    .0677**    .0144     -.0317*     .0830**    .0544**    .0280      .0586**
IIIB5       .0853**    .1054**    .0548**    .2186**    .1111**    .1205**    .0591**    .0875**    .1318**    .0765**    .0420**
IIIB6      -.0911**   -.1180**    .0199      .0636**   -.0407*    -.0261     -.0093     -.0363*    -.0439**   -.0350*    -.0680**
IIIB7       .1844**    .1397**    .0175      .1561**    .1300**    .1092**    .0880**    .0813**    .1465**    .1212**    .1001**
IIIB8       .0882**    .0566**    .0820**    .0256      .1372**    .0578**    .0306      .0501**    .0647**    .1235**    .0949**
IIIB9       .1608**    .1706**    .0506**    .1617**    .1877**    .1337**    .0536**    .0686**    .1353**    .2218**    .0983**
IIIB10      .0530**    .0362*     .0979**    .1477**    .0782**   -.0117      .0140      .0800**    .1283**    .1025**    .0348*
IIIB11      .0653**    .0593**    .0576**    .1149**    .1433**    .0061      .0064      .0659**    .1087**    .1085**    .1461**
IIIB12      .1220**    .0820**   -.0137      .0948**    .1084**    .0663**    .0396*     .0443**    .0400*     .0715**    .0670**
IIIB13      .0514**    .0687**   -.0066      .1143**    .1628**    .0658**    .0405*     .0096      .0943**    .0881**    .0796**
IIIB14      .0177     -.0383*    -.0722**    .0027      .1166**    .0035      .0360*    -.0824**   -.0432**    .0657**    .0408*
IIIB15      .0522**    .0368*    -.1011**    .1752**    .0733**   -.0020      .0085     -.0107      .0218      .0394*     .0440**
IIIB16      .2237**    .2642**    .0650**    .1665**    .1680**    .0771**    .0695**    .1241**    .1741**    .1701**    .1087**
IIIB17     -.0345*    -.0436**   -.0097      .0494**    .0330*     .0604**    .0719**   -.0264      .0652**    .0220      .0476**
IIIC1      -.0150     -.0269      .0424**    .0773**    .0592**    .0411**    .0944**    .0314*     .0781**    .0792**    .0869**
IIIC2      -.0668**   -.0423**   -.0083     -.0220     -.0051      .0516**    .0435**   -.0415**   -.0313*     .0020      .0270
IIIC3       .0492**    .0618**   -.0059     -.0429**    .0313*    -.0115      .0216      .0105      .0088     -.0050     -.0174
IIIC4       .0418**    .0448**    .0549**    .0118      .0562**    .0179      .0647**    .0601**    .0445**    .0121      .0145
IIIC5       .0549**    .0771**    .0177     -.0106      .0356*    -.0052      .0101      .0574**    .0357*     .0141      .0000
IIIC6       .0557**    .0611**    .0462**    .0375*     .0657**   -.0141      .0148      .0526**    .0633**    .0283      .0262
IIIC7       .1211**    .1920**    .0288      .1047**    .1408**    .0582**    .0750**    .0754**    .1033**    .1054**    .0876**
IIIC8       .0033      .0178     -.0402*     .0901**    .1094**    .0328*     .0286     -.0059      .0509**    .0381*     .0495**
IIIC9       .0379*     .0524**   -.0850**    .0867**    .0729**   -.0176     -.0375*     .0036     -.0031      .0213      .0140

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH                                        Page  24
12:20:38    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                              - -  Correlation Coefficients  - -

                C10        C11        C12        C13        IIA1       IIA2       IIB1       IIB2       IIB3       IIB4       IIB5

SEXIND          .0817**   -.1372**   -.0260     -.0937**   -.2250**   -.0588**   -.1187**   -.1803**    .1522**   -.0630**    .0436**
RACEIND         .0516**   -.0177      .0653**   -.0506**    .1383**    .1096**   -.0195     -.0483**   -.0227     -.0122     -.0481**
CHANGIND        .0288      .0213      .0266      .0172     -.0659**   -.0275      .0042     -.1173**    .0637**    .0107      .0009
A1              .1255**    .0313*     .2298**    .1751**   -.0007     -.0219      .0261     -.1073**    .0708**    .0855**    .0323*
A2              .1189**   -.0243     -.1084**   -.0865**   -.0683**   -.0364*    -.0247     -.0527**    .0776**   -.0105      .0417**
A3             -.0060     -.0353*     .1375**    .2162**    .0386*     .0047      .0219      .0059      .0180      .0099     -.1124**
A4             -.1039**    .0863**   -.1253**   -.0148     -.0439**   -.0938**    .0318*    -.0134      .0318*     .0550**    .0014
A5             -.1530**   -.0396*    -.2062**   -.0986**    .0318*    -.0494**    .0488**    .1161**   -.0509**   -.0478**    .0121
A6             -.1738**    .0923**   -.1363**    .0220      .0382*    -.0336*     .0745**    .1219**   -.0598**    .0035      .0082
A7              .0334*     .0184      .1485**    .1967**   -.0267      .0249      .1159**   -.1122**   -.1093**    .0524**   -.0093
A8             -.0865**    .0635**   -.0400*    -.0470**    .1869**   -.0547**   -.0537**    .0097     -.0509**   -.0218     -.0633**
A9             -.1372**   -.0398*    -.2047**   -.1052**    .0292     -.0617**    .0270      .0704**    .0120     -.0204      .0299
A10            -.0143      .0569**   -.0751**   -.0118     -.0709**   -.0907**    .0782**    .0573**   -.0173      .0825**    .1813**
A11             .0616**    .0231      .1220**    .3321**    .0385*    -.0244      .0918**    .0248     -.0043      .0994**    .0292
A12            -.1719**    .0031     -.1816**   -.0999**   -.0142     -.1188**    .0679**   -.0225     -.0604**   -.0398*    -.0086
A13             .2033**    .0393*     .3995**    .1467**   -.0305      .0225     -.0866**   -.0822**    .0591**    .0556**    .0406*
A14            -.0856**   -.0825**   -.1396**   -.0666**    .0805**   -.0506**    .1237**    .0789**   -.2698**   -.0767**   -.0235
A15             .0050     -.0517**   -.1945**   -.0893**   -.0329*    -.0877**   -.0111     -.0047      .0585**   -.0622**    .0113
A16             .2332**    .0687**    .2387**    .1792**   -.1296**    .0145     -.0252     -.0573**   -.0060      .0217      .0043
A17            -.0807**   -.0711**   -.5313**   -.2464**   -.0448**   -.0435**   -.0383*    -.0371*     .0252     -.0460**    .0114
A18             .1307**    .0669**    .1960**    .1353**    .0127      .0808**    .0010     -.0486**    .0277      .0509**   -.0079
A19            -.0680**    .0386*    -.0742**   -.0155     -.0371*    -.0827**   -.0024      .0524**   -.0183     -.0471**    .0271
A20            -.0273      .0371*    -.1292**   -.1244**   -.0348*    -.0221     -.0040      .0585**    .0255      .0470**    .0566**
A21             .2079**    .0490**    .4132**    .1421**    .0001      .0584**   -.0543**   -.0736**    .0213      .0591**    .0097
A22            -.1336**   -.0113     -.1339**   -.1601**    .2053**   -.0518**    .0001      .2004**   -.0675**   -.0098     -.0208
A23            -.0675**    .0668**    .0906**    .2429**    .0251      .0513**    .0353*     .0245     -.0136      .0145     -.0772**
A24            -.0336*    -.0409**   -.3270**   -.1524**   -.0661**   -.0794**   -.0253     -.0187      .0435**   -.0358*     .0510**
A25            -.0186     -.0118     -.1816**   -.1600**   -.0580**   -.0296     -.0167     -.0069      .0791**   -.0093      .0368*
A26            -.1282**   -.0211     -.1002**   -.0573**    .0369*    -.0389*     .0008      .0444**   -.0417**   -.0275     -.0409**
A27             .0487**    .0045      .1543**    .2283**   -.0449**   -.0330*     .0615**    .0368*    -.0304      .0460**   -.0360*
A28            -.0347*    -.0179      .1382**    .1225**    .0544**    .0595**   -.0028      .0305     -.0395*     .0556**   -.0411**
B1              .0474**    .0373*     .1547**    .1820**   -.0063      .0235      .0270      .0445**    .0084      .0058     -.0618**
B2              .0953**    .0465**    .2213**    .1717**   -.0402*     .0490**    .0248      .0136      .0085      .0539**   -.0105
B3              .0310      .0049      .0267      .0384*    -.0573**    .0360*    -.0104      .0358*    -.0428**   -.0214      .0003
B4             -.0282      .0212      .1254**    .0728**    .0187      .0425**   -.0221      .0024     -.0564**    .0120     -.0709**
B5             -.0103      .0233      .0688**    .1387**   -.0860**    .0081      .0267      .0699**   -.0538**    .0162     -.0312*
B6              .0872**    .0355*     .2034**    .0964**    .0293      .0595**    .0629**    .0388*    -.0189      .0572**    .0046
B7              .0659**    .0387*     .2528**    .1266**    .0591**    .0766**    .0125      .0207     -.0502**    .0689**   -.0335*
B8              .0875**    .0247      .3689**    .1652**    .0133      .0647**   -.0266      .0150      .0131      .0519**   -.0499**
B9              .0838**    .0444**    .0997**    .1059**   -.0590**    .0145     -.0468**   -.0201      .0554**    .0125      .0270
B10             .1060**    .0169      .2516**    .1438**   -.0141      .0798**   -.0504**   -.0197     -.0183      .0064     -.0487**
B11             .1178**    .0129      .2515**    .1168**   -.0080      .0460**   -.0449**   -.0142     -.0372*     .0210     -.0414**
B12             .0208      .0305      .1151**    .0722**    .0152      .0030      .0069      .0340*    -.0065      .0087     -.0469**
B13             .0203     -.0265      .1363**    .0935**    .0046      .0156     -.0215      .0000     -.1034**   -.0335*    -.0185
B14             .0470**    .0628**    .3298**    .1964**    .0327*     .0407*     .0620**    .0461**   -.0781**    .0171     -.0172

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH                                        Page  25
12:20:38    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                         - -  Correlation Coefficients  - -

               C10        C11        C12        C13        IIA1       IIA2       IIB1       IIB2       IIB3       IIB4       IIB5

B15            .0816**    .0517**    .3692**    .2128**    .0376*     .0343*    -.0031      .0352*    -.0173      .0630**   -.0364*
C1             .3834**    .0237      .0579**   -.0189     -.1438**    .0259     -.1761**   -.0917**    .4329**    .0744**    .0813**
C2             .1943**    .0793**    .2495**    .2026**   -.1141**   -.0358*     .0821**   -.1104**   -.0731**    .0893**    .1330**
C3             .1916**    .5051**    .2513**    .1506**   -.0655**   -.0378*    -.0186      .0652**   -.0035      .0349*     .0667**
C4             .1855**    .0443**    .1892**    .0985**   -.0313*    -.0234     -.0498**    .0445**   -.2422**   -.0457**   -.0360*
C5             .0990**    .0353*     .1334**    .0488**   -.0038     -.0485**   -.0369*     .0533**   -.2989**   -.0749**   -.0491**
C6             .4549**   -.0401*     .1353**   -.0088     -.0839**   -.0086     -.0962**   -.0800**    .1153**    .0240      .0944**
C7             .5018**   -.0101      .2000**    .1337**   -.1838**   -.0097     -.1059**   -.0831**    .1860**    .0377*     .1116**
C8             .2168**    .4205**    .2910**    .1857**   -.0691**   -.0424**    .0079      .0139      .0443**    .0894**    .0521**
C9             .2256**    .3415**    .2236**    .1898**   -.0764**   -.0573**    .0628**    .0730**   -.0179      .1182**    .0973**
C10           1.0000     -.0744**    .1611**    .0819**   -.1661**    .0220     -.0627**   -.0656**    .1460**    .0315*     .1289**
C11           -.0744**   1.0000      .1913**    .1231**    .0499**   -.0239      .0623**    .0594**   -.0382*     .0648**    .0452**
C12            .1611**    .1913**   1.0000      .4498**   -.0019      .0226      .0038      .0365*    -.0500**    .0810**   -.0077
C13            .0819**    .1231**    .4498**   1.0000     -.0301      .0141      .1226**    .1682**   -.1043**    .0144      .0243
IIA1          -.1661**    .0499**   -.0019     -.0301     1.0000      .0480**   -.0079      .0913**   -.1263**    .0296     -.1372**
IIA2           .0220     -.0239      .0226      .0141      .0480**   1.0000     -.0044      .0239     -.0115     -.0031     -.1478**
IIB1          -.0627**    .0623**    .0038      .1226**   -.0079     -.0044     1.0000      .1461**   -.1179**    .0666**    .0609**
IIB2          -.0656**    .0594**    .0365*     .1682**    .0913**    .0239      .1461**   1.0000     -.2398**   -.1258**   -.0924**
IIB3           .1460**   -.0382*    -.0500**   -.1043**   -.1263**   -.0115     -.1179**   -.2398**   1.0000      .2304**    .1635**
IIB4           .0315*     .0648**    .0810**    .0144      .0296     -.0031      .0666**   -.1258**    .2304**   1.0000      .1755**
IIB5           .1289**    .0452**   -.0077      .0243     -.1372**   -.1478**    .0609**   -.0924**    .1635**    .1755**   1.0000
IIC1          -.1884**   -.0555**   -.1055**   -.1001**    .2298**   -.0016      .0550**    .2359**   -.2609**   -.0745**   -.1143**
IIC2          -.0662**   -.0693**   -.0867**   -.1437**    .2627**    .3007**   -.1219**   -.0015     -.0009     -.0249     -.1785**
IIC3           .0581**   -.0567**   -.0649**   -.1608**   -.0443**    .0109     -.0705**   -.1900**    .1034**    .0600**    .1631**
IIC4           .0038     -.0147     -.0133     -.0817**    .0116      .1442**    .0027     -.0838**    .0732**    .0521**    .0235
IIC5          -.0278     -.0654**   -.0624**   -.0747**    .0183      .0896**   -.0038     -.0602**    .1064**    .0315*     .0616**
IIC6          -.1203**   -.0744**   -.0674**   -.1198**   -.2005**    .2301**   -.0597**   -.0381*     .0110     -.0178     -.1354**
IIC7           .0118     -.0938**   -.0815**   -.0908**    .0630**    .1993**   -.0819**   -.0468**   -.0022     -.0324*    -.0270
IIC8          -.0493**   -.0429**   -.0757**   -.0932**   -.0020      .0116      .0040     -.0573**    .0628**    .1206**    .0693**
IIC9          -.0046     -.1198**   -.1296**   -.1666**   -.0303     -.0630**   -.0821**   -.2131**    .1458**    .0617**    .1102**
IIC10          .0855**   -.0087      .0071     -.0137     -.1667**    .0165     -.0155     -.1737**    .1654**    .0342*     .1254**
IIC11          .0507**   -.0138      .0150     -.0217     -.1562**   -.0787**   -.0257     -.1821**    .1405**    .0452**    .1257**
IIC12          .0198      .0118     -.0351*    -.0210     -.1179**   -.1508**   -.0284     -.1578**    .1122**    .0728**    .1260**
IID1          -.0086      .0065     -.1307**   -.0960**   -.1234**   -.1291**    .1376**   -.2341**    .0504**    .0308      .1241**
IID2          -.0197     -.0772**   -.1635**   -.0783**    .0037     -.0188      .1133**   -.0046      .2822**    .0917**    .0509**
IID3          -.0526**   -.0735**   -.0546**    .0038      .0668**    .0143      .0818**    .1800**   -.2998**   -.0963**   -.0260
IID4           .0479**   -.0309     -.0459**   -.0585**    .0144      .0198     -.0940**    .2265**    .0049     -.0917**   -.0341*
IID5          -.0061     -.0374*    -.0700**   -.0303      .0729**    .0054      .0688**    .1277**   -.0146      .0122      .0223
IID6          -.0259     -.1688**   -.1202**   -.1069**    .0105      .0231     -.0435**    .1281**   -.0517**   -.3569**   -.1079**
IID7          -.0357*     .0043     -.0668**   -.0972**   -.0190     -.0076     -.0388*    -.4043**    .2101**    .1281**    .0687**
IID8          -.0776**   -.0086     -.0779**   -.0880**   -.0320*    -.0600**    .0460**   -.2699**    .1436**    .0902**    .0720**
IID9          -.1812**   -.0168     -.0093      .0690**    .1605**   -.0145      .2325**    .1819**   -.5441**   -.1034**   -.0804**
IID10         -.0617**   -.0495**    .0350*     .0369*     .2516**    .0456**   -.0371*     .2092**   -.2395**   -.0463**   -.0723**
IID11          .0453**   -.0694**   -.0420**   -.0057     -.1135**    .0235     -.0643**   -.0183      .0622**   -.0903**    .0016
IID12         -.3241**    .0439**   -.0793**   -.1039**    .0954**   -.0284     -.0142     -.0725**    .0283     -.0122     -.1171**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)           " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH                                     Page  26
12:20:38    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                         - -  Correlation Coefficients  - -

             C10         C11         C12         C13         IIA1        IIA2        IIB1        IIB2        IIB3        IIB4        IIB5

IID13      -.0597**    -.0268      -.0739**    -.1277**     .1219**     .1620**    -.0515**    -.2140**     .1412**     .1049**    -.1377**
IID14      -.0573**    -.0284      -.1518**    -.1379**     .0632**     .0519**     .0230      -.2290**     .1953**     .1017**    -.0511**
IID15      -.0207      -.0598**    -.0883**    -.0430**     .0013       .0562**     .0013       .0372*      .0647**    -.0632**    -.0652**
IID16      -.0307      -.0229       .0071       .0143       .0095       .0045      -.0275       .0839**    -.0112      -.0280      -.0337*
IID17      -.1091**     .0913**    -.0560**     .0131       .1581**     .0044       .0891**     .1567**    -.1925**    -.0306      -.0297
IID18      -.1332**     .0038      -.0331*     -.0248       .1416**     .0153      -.0169       .1080**    -.1072**     .0534**    -.0567**
IID19      -.0954**    -.0510**    -.1069**    -.1553**     .2033**     .1465**    -.0735**    -.1852**     .0799**     .0125      -.1128**
IID20      -.0545**    -.0119      -.0779**    -.0201      -.0034      -.0447**     .1628**     .0467**     .2051**     .0410**     .0513**
IID21       .0461**    -.0551**    -.1366**    -.0792**    -.0493**     .0099       .0017       .1402**     .0936**    -.0665**     .0190
IID22      -.1149**     .0212      -.0797**    -.0880**     .1666**     .0379*      .0943**     .0974**     .0021       .0985**    -.0252
IIIB1       .0824**    -.0621**     .0419**     .0452**    -.1989**     .0174       .0767**     .0655**     .0166       .0086       .0418**
IIIB2      -.0092       .0673**     .0746**     .1518**     .0035      -.0187       .1544**     .3219**    -.1820**    -.0850**    -.0026
IIIB3      -.0490**    -.0743**    -.1275**    -.0834**    -.0147      -.1272**     .0370*      .0858**     .0033       .0130       .1083**
IIIB4       .1111**     .0064      -.0102       .0616**    -.3778**    -.1011**     .0955**    -.0094       .0818**     .0008       .1202**
IIIB5       .1089**     .0172       .1103**     .0920**    -.1603**     .0231      -.0562**    -.1157**     .0080      -.0095      -.0248
IIIB6      -.0652**    -.0098      -.1579**    -.0581**    -.0247      -.0840**     .0056       .0459**    -.0077      -.0306       .0515**
IIIB7       .1463**     .0628**     .1860**     .1306**    -.0841**     .0572**     .0296       .0260      -.0545**     .0294      -.0369*
IIIB8       .0807**     .0844**     .0696**     .0951**    -.1925**    -.0601**    -.0810**     .0269       .0608**     .0371*      .0571**
IIIB9       .1635**     .1512**     .2229**     .1374**     .0337*      .1077**    -.0508**    -.0618**    -.0184       .0434**    -.0866**
IIIB10      .0826**     .0646**     .0700**     .0332*     -.1933**    -.0493**     .0298      -.2173**     .1332**     .0835**     .0566**
IIIB11      .0913**     .0531**     .0773**     .1088**    -.3081**    -.0996**     .0893**    -.0099       .0455**     .0240       .1624**
IIIB12      .0297       .0571**     .1455**     .1212**    -.1439**     .0147       .0187      -.0315*     -.0172      -.0383*      .0473**
IIIB13      .0474**     .0742**     .1563**     .1285**    -.0168       .0203      -.1072**     .1143**    -.0514**    -.0012       .0186
IIIB14     -.1113**     .1187**     .0435**     .0649**     .0351*     -.0922**    -.0096       .0487**    -.0555**     .0230       .0259
IIIB15     -.0056       .0387*      .1085**     .0603**     .0180       .0493**     .0099       .0478**    -.0994**     .0124      -.0016
IIIB16      .1773**     .1088**     .3579**     .1824**    -.0354*      .0402*     -.0857**    -.0345*      .0536**     .0958**     .0300
IIIB17      .0614**     .0290       .0539**     .0832**    -.0270      -.0424**     .0162       .0527**    -.0381*      .0370*      .0250
IIIC1       .0962**     .0344*      .0060       .0129      -.0521**    -.0060      -.0270      -.0159       .0192      -.0340*      .0215
IIIC2      -.0004      -.0005      -.0546**     .0022      -.0050       .0334*      .0265      -.0036      -.0328*      .0062      -.0016
IIIC3       .0100      -.0180       .0431**     .0512**     .0144      -.0025       .0243       .0742**     .0002      -.0036      -.0094
IIIC4       .0630**     .0148       .0451**     .0458**     .0240      -.0315*     -.0134       .0454**     .0102      -.0179      -.0157
IIIC5       .0454**    -.0116       .0356*      .0123       .0299       .0126       .0000       .0158       .0189      -.0094      -.0066
IIIC6       .0798**     .0179       .0191       .0245       .0067      -.0109      -.0046       .0222       .0324*     -.0168       .0078
IIIC7       .1450**     .0971**     .2375**     .1114**    -.0506**     .0189      -.0697**    -.0254      -.0058       .0081       .0370*
IIIC8       .0023       .0483**     .0886**     .0893**     .0239       .0215      -.0595**     .0860**    -.0426**     .0064      -.0208
IIIC9       .0035       .0369*      .0738**     .0396*      .0296       .0425**    -.0245       .0430**    -.0699**     .0184       .0010

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH                                            Page  27
12:20:38    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                          - -  Correlation Coefficients  - -

              IIC1       IIC2       IIC3       IIC4       IIC5       IIC6       IIC7       IIC8       IIC9       IIC10      IIC11

SEXIND       -.1797**    .0179      .1054**   -.0182      .0725**    .1009**    .0457**    .0020      .1541**    .1115**    .1093**
RACEIND       .0108      .1475**    .0213      .0836**    .0749**    .1069**    .0959**    .0053      .0668**   -.0088     -.0174
CHANGIND     -.0960**   -.0359*     .0143      .0407*     .0380*     .0037     -.0448**    .0345*     .0650**    .0883**    .0825**
A1           -.1597**   -.0904**   -.0310      .0427**    .0543**   -.0218     -.0937**   -.0305     -.0723**    .0736**    .0954**
A2           -.0484**   -.0305      .0255     -.0467**   -.0494**   -.0922**   -.0831**   -.0114      .0252      .0076      .0127
A3           -.0555**    .0150     -.0661**    .0236      .0036      .0061     -.0033     -.0630**   -.0342*     .0270      .0070
A4           -.0555**   -.1358**   -.0385*    -.0324*    -.0620**   -.0673**   -.0601**    .0035      .0463**    .0312      .0463**
A5            .1780**   -.0247     -.0100     -.0719**   -.0746**   -.0467**    .0639**   -.0134      .0197     -.0882**   -.0957**
A6            .0354*    -.0291     -.0533**   -.0630**    .0116     -.0336*    -.0103     -.0025     -.0119     -.0753**   -.0272
A7           -.1154**   -.0418**   -.0273      .0546**   -.0569**   -.0429**   -.0684**   -.0622**   -.1385**    .0195     -.0268
A8            .0583**    .0515**   -.0026     -.0478**   -.0388*     .0128      .0220     -.0064      .0127     -.1016**   -.0869**
A9            .1391**    .0110      .0468**    .0164      .0509**    .0447**    .0635**    .0904**    .1285**   -.0182      .0257
A10          -.0464**   -.1458**    .0028     -.0373*    -.0009     -.1190**   -.0955**   -.0349*    -.0798**   -.0321     -.0462**
A11          -.0632**   -.0709**   -.0976**   -.0070      .0689**   -.0944**   -.0641**   -.0381*    -.0655**   -.0094      .0455**
A12           .0636**   -.0823**   -.0361*    -.0307     -.0725**   -.0319*    -.0852**   -.0115      .0167     -.0198     -.0133
A13          -.1670**   -.0306     -.0072      .0472**    .0176      .0396*    -.0052      .0115     -.0130      .0814**    .0920**
A14           .1331**   -.0335*    -.0014      .0103      .0132     -.0104     -.0541**   -.0022     -.0365*    -.0818**   -.0452**
A15          -.0162     -.0213     -.0177     -.0731**   -.0777**   -.0215     -.0289     -.0191      .0485**    .0050      .0229
A16          -.2066**   -.1129**   -.0471**    .0337*    -.0344*    -.1156**   -.0941**   -.1030**   -.1438**    .0713**    .0421*
A17           .0222      .0160      .0830**    .0010      .0003      .0305      .0453**    .0249      .0813**   -.0032     -.0161
A18          -.1565**   -.0126     -.0451**    .0495**    .0762**   -.0034     -.0574**   -.0186     -.0573**    .1008**    .0333*
A19          -.0349*    -.0705**   -.0338*    -.0128     -.0432**   -.0388*    -.0553**   -.0411**    .0180      .0329*    -.0262
A20           .0412**    .0148      .0186     -.0371*    -.0705**   -.0236     -.0232      .0174     -.0231     -.0351*    -.0364*
A21          -.1324**   -.0083     -.0199      .0687**    .0195      .0040     -.0165      .0298     -.0216      .0545**    .0570**
A22           .3085**    .0900**    .0038     -.0583**   -.0337*     .0475**    .0422**    .0251     -.0219     -.1795**   -.1218**
A23          -.0167     -.0492**   -.1019**    .0191      .0852**    .0034     -.0571**   -.0283     -.1092**   -.0216     -.0682**
A24          -.0335*    -.0420**    .0722**   -.0431**   -.0750**   -.0199      .0053      .0009      .1039**    .0220     -.0014
A25          -.0373*    -.0073      .0657**    .0147     -.0110      .0406*     .0243      .0220      .1015**    .0367*     .0697**
A26           .0906**    .0743**   -.0168     -.0333*    -.0663**    .0302      .0070     -.0271      .0443**   -.1011**   -.0343*
A27          -.0322*    -.0992**   -.1080**   -.0185     -.0142     -.0656**   -.0695**   -.0882**   -.0728**   -.0088     -.0145
A28           .0418**    .0328*    -.0371*     .0578**    .0259      .0236      .0176     -.0280     -.0933**   -.0613**   -.0539**
B1           -.1131**   -.0712**   -.0723**    .0029      .0167     -.0444**   -.0601**   -.0469**   -.1008**    .0228      .0143
B2           -.0594**   -.0689**   -.0220     -.0091      .0562**   -.0650**   -.0335*     .0237     -.1176**    .0152      .0270
B3           -.0285     -.0521**   -.0265     -.0249     -.0310     -.0837**   -.0419**   -.0010     -.1253**   -.0035     -.0037
B4           -.0410**   -.0213     -.0225      .0308      .0339*    -.0061      .0124     -.0327*    -.0753**   -.0273     -.0442**
B5           -.0544**   -.0926**   -.0365*    -.0070      .0625**   -.0591**   -.0825**   -.0406*    -.1115**   -.0194     -.0187
B6           -.0459**    .0160     -.0620**    .0391*     .0767**   -.0004     -.0019     -.0339*    -.0972**    .0054     -.0260
B7           -.0484**    .0205     -.0505**    .0556**    .0627**    .0394*    -.0425**   -.0348*    -.1094**    .0178      .0112
B8           -.0019      .0374*    -.0615**    .0297      .0366*     .0435**    .0203     -.0134     -.0532**   -.0125      .0139
B9           -.1042**   -.0656**   -.0110     -.0160      .0023     -.0442**   -.0213     -.0343*    -.0609**    .0365*     .0531**
B10          -.0272      .0044     -.0213     -.0081      .0099     -.0126     -.0132     -.0323*    -.1102**   -.0189      .0120
B11          -.0760**   -.0134     -.0090      .0386*    -.0156      .0093     -.0008     -.0586**   -.0727**    .0173      .0039
B12          -.0349*    -.0072     -.0761**   -.0309      .0368*    -.0392*    -.0459**   -.0522**   -.1016**   -.0068      .0173
B13          -.0272     -.0238     -.0244     -.0055     -.0457**   -.0467**    .0128     -.0393*    -.1025**   -.0059     -.0117
B14          -.0479**   -.0311     -.0635**    .0078     -.0041     -.0148      .0212     -.0669**   -.1251**   -.0051     -.0288

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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                           - -  Correlation Coefficients  - -

           IIC1       IIC2       IIC3       IIC4       IIC5       IIC6       IIC7       IIC8       IIC9       IIC10      IIC11

B15      -.0495**    .0026     -.0850**    .0075     -.0046      .0029     -.0070     -.0454**   -.1043**   -.0075      .0417*
C1       -.1895**    .0233      .0235      .0211      .0561**   -.0131     -.0008     -.0456**    .0525**    .0664**    .0520**
C2       -.1731**   -.1483**    .0160      .0137     -.1031**   -.1044**   -.0682**   -.0832**   -.1197**    .0493**    .0160
C3       -.0957**   -.0732**   -.0526**   -.0509**   -.1089**   -.1485**   -.1137**   -.1056**   -.1319**   -.0023      .0139
C4       -.0500**    .0030      .0238      .0168     -.0891**   -.0351*    -.0109     -.1090**   -.0877**   -.0058     -.0481**
C5       -.0237     -.0096      .0245     -.0205     -.0750**   -.0325*     .0397*    -.0690**   -.0796**   -.0055     -.0485**
C6       -.1070**    .0319*     .0368*     .0470**    .0040     -.0304      .0177     -.0594**    .0180     -.0031      .0288
C7       -.2688**   -.0648**    .0284      .0222     -.0200     -.0192      .0162     -.0823**   -.0109      .0821**    .0688**
C8       -.1306**   -.0964**   -.0481**   -.0619**   -.0664**   -.1228**   -.1263**   -.0725**   -.1451**    .0443**    .0164
C9       -.0463**   -.1355**   -.0460**   -.0817**   -.0349*    -.1202**   -.0869**    .0048     -.0839**    .0111      .0409*
C10      -.1884**   -.0662**    .0581**    .0038     -.0278     -.1203**    .0118     -.0493**   -.0046      .0855**    .0507**
C11      -.0555**   -.0693**   -.0567**   -.0147     -.0654**   -.0744**   -.0938**   -.0429**   -.1198**   -.0087     -.0138
C12      -.1055**   -.0867**   -.0649**   -.0133     -.0624**   -.0674**   -.0815**   -.0757**   -.1296**    .0071      .0150
C13      -.1001**   -.1437**   -.1608**   -.0817**   -.0747**   -.1198**   -.0908**   -.0932**   -.1666**   -.0137     -.0217
IIA1      .2298**    .2627**   -.0443**    .0116      .0183      .2005**    .0630**   -.0020     -.0303     -.1667**   -.1562**
IIA2     -.0016      .3007**    .0109      .1442**    .0896**    .2301**    .1993**    .0116     -.0630**    .0165     -.0787**
IIB1      .0550**   -.1219**   -.0705**    .0027     -.0038     -.0597**   -.0819**    .0040     -.0821**   -.0155     -.0257
IIB2      .2359**   -.0015     -.1900**   -.0838**   -.0602**   -.0381*    -.0468**   -.0573**   -.2131**   -.1737**   -.1821**
IIB3     -.2609**   -.0009      .1034**    .0732**    .1064**    .0110     -.0022      .0628**    .1458**    .1654**    .1405**
IIB4     -.0745**   -.0249      .0600**    .0521**    .0315*    -.0178     -.0324*     .1206**    .0617**    .0342*     .0452**
IIB5     -.1143**   -.1785**    .1631**    .0235      .0616**   -.1354**   -.0270      .0693**    .1102**    .1254**    .1257**
IIC1     1.0000      .2100**   -.0073     -.0269      .0221      .0656**    .0313*     .1446**    .0267     -.4163**   -.2477**
IIC2      .2100**   1.0000      .1789**    .1612**    .0932**    .3189**    .3183**    .1129**    .0736**   -.1896**   -.2322**
IIC3     -.0073      .1789**   1.0000      .3623**    .2014**    .1213**    .2178**    .1906**    .2160**    .0804**   -.0690**
IIC4     -.0269      .1612**    .3623**   1.0000      .3136**    .2463**    .1780**    .1644**    .1724**    .1144**   -.0355*
IIC5      .0221      .0932**    .2014**    .3136**   1.0000      .2409**    .1564**    .2799**    .1642**    .1931**    .0806**
IIC6      .0656**    .3189**    .1213**    .2463**    .2409**   1.0000      .3149**    .1486**    .1806**    .1204**    .0175
IIC7      .0313*     .3183**    .2178**    .1780**    .1564**    .3149**   1.0000      .1008**    .1610**    .1141**    .1218**
IIC8      .1446**    .1129**    .1906**    .1644**    .2799**    .1486**    .1008**   1.0000      .2444**    .1150**    .1881**
IIC9      .0267      .0736**    .2160**    .1724**    .1642**    .1806**    .1610**    .2444**   1.0000      .2045**    .3393**
IIC10    -.4163**   -.1896**    .0804**    .1144**    .1931**    .1204**    .1141**    .1150**    .2045**   1.0000      .5023**
IIC11    -.2477**   -.2322**   -.0690**   -.0355*     .0806**    .0175      .1218**    .1881**    .3393**    .5023**   1.0000
IIC12    -.1218**   -.1767**   -.0993**   -.0834**   -.0213     -.0594**   -.0194      .1429**    .4467**    .2581**    .5590**
IID1     -.0368*    -.1082**    .0828**    .0296      .0887**   -.0073     -.0029      .0999**    .1265**    .1428**    .1304**
IID2      .0716**    .0232     -.0325*     .0212      .0383*    -.0353*    -.0511**    .0308      .0694**    .0219      .0202
IID3      .1659**    .0554**   -.0210     -.0358*    -.0245      .0178      .0487**    .0090     -.0423**   -.1190**   -.1180**
IID4      .1662**    .0689**    .0174     -.0203     -.0287      .0120      .0676**   -.0149      .0000     -.1206**   -.1025**
IID5      .1710**    .1028**   -.0183     -.0191     -.0243      .0267      .0540**    .0707**    .0450**   -.0615**   -.0687**
IID6      .1680**    .0733**   -.0567**   -.0140      .0315*     .1000**    .0900**   -.0451**    .0151     -.1052**   -.0282
IID7     -.1733**    .0451**    .1651**    .0766**    .0653**    .0625**    .0192      .0915**    .1654**    .1451**    .1200**
IID8     -.0306      .0062      .0839**    .0028      .0591**    .0621**   -.0120      .1181**    .1826**    .1024**    .1162**
IID9      .2544**   -.0022     -.0696**   -.0694**   -.0712**   -.0319*    -.0197     -.0187     -.0979**   -.1791**   -.1556**
IID10     .3192**    .1448**   -.0236     -.0119     -.0098      .0217      .0218      .0205     -.0352*    -.2533**   -.2116**
IID11    -.1062**    .0364*     .0215      .0094     -.0462**    .0523**    .0920**   -.0975**    .0708**    .0388*     .0414*
IID12     .1150**    .1246**    .0046      .0019      .0272      .1096**   -.0061      .0917**    .0774**   -.0571**   -.0260

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)         " . " printed if a coefficient cannot be computed
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- - Correlation Coefficients - -

	IIC1	IIC2	IIC3	IIC4	IIC5	IIC6	IIC7	IIC8	IIC9	IIC10	IIC11
IID13	-.0263	.2379**	.0503**	.0739**	.0277	.1344**	.0192	.0571**	.0922**	.0007	-.0499**
IID14	.0204	.1476**	.0604**	.0343*	.0482**	.0695**	.0181	.1049**	.1397**	.0236	.0071
IID15	.0067	.0751**	-.0235	-.0124	-.0065	.0505**	.0988**	-.0669**	.0640**	.0074	.0073
IID16	.0458**	.0527**	.0111	.0739**	.0365*	.0395*	.0322*	.0237	.0781**	.0267	-.0096
IID17	.2218**	.1076**	-.0374*	-.0129	.0106	.0177	-.0068	.0017	-.0619**	-.1567**	-.1209**
IID18	.2497**	.1425**	-.0571**	-.0701**	-.0077	.0122	-.0036	.1341**	-.0381*	-.1239**	-.0951**
IID19	.0285	.3389**	.0413**	.0662**	.0174	.2241**	.1173**	.0766**	.0902**	.0174	-.0545**
IID20	.0765**	-.0160	-.0549**	-.0371*	.0468**	-.0042	-.0496**	.0593**	.1037**	-.0145	.0555**
IID21	.0606**	.0048	-.0175	-.0224	.0172	.0462**	.0937**	.0221	.0632**	.0058	.0013
IID22	.2584**	.1209**	-.0452**	-.0186	.0283	.0240	-.0163	.1349**	.0750**	-.1118**	-.0752**
IIIB1	-.0396*	-.0928**	-.0107	-.0144	-.0252	-.0374*	-.0518**	-.0092	-.0882**	.0540**	.0421*
IIIB2	.1133**	-.1111**	-.1460**	-.1134**	-.0353*	-.0907**	-.0146	-.0809**	-.1985**	-.0540**	-.0737**
IIIB3	.1208**	-.0568**	.0545**	-.0229	-.0351*	-.0004	.0386*	.0454**	.0502**	-.0629**	.0054
IIIB4	-.1305**	-.1892**	-.0175	-.0186	-.0190	-.1178**	-.1140**	.0354*	-.0083	.1337**	.1263**
IIIB5	-.2592**	-.0589**	.0068	.0220	-.0099	-.0095	-.0340*	-.0726**	-.0653**	.1666**	.0723**
IIIB6	.0439**	.0232	.0309	-.0065	-.0236	.0218	.0328*	.0523**	.0751**	-.0078	-.0165
IIIB7	-.1337**	-.0775**	-.0611**	.0069	-.0632**	-.1279**	-.0820**	-.1136**	-.3331**	-.0233	-.1140**
IIIB8	-.1081**	-.1339**	-.0431**	-.0609**	-.0215	-.2571**	-.1228**	-.0603**	-.0615**	.0587**	.0321
IIIB9	-.1621**	.0277	-.0372*	.0463**	-.0560**	-.0283	-.0645**	-.0882**	-.1839**	.0249	-.0275
IIIB10	-.3906**	-.1475**	-.0521**	.0470**	.0170	-.0510**	-.0842**	-.0517**	.0023	.2477**	.1518**
IIIB11	-.1720**	-.3899**	-.0508**	-.0406*	-.0203	-.1590**	-.1354**	-.0450**	-.0426**	.1446**	.1316**
IIIB12	-.0582**	-.1399**	-.0633**	-.0536**	-.0772**	-.0425**	-.0366*	-.0801**	-.1023**	.0423*	.0648**
IIIB13	-.0633**	-.0346*	-.0642**	-.0125	-.0346*	-.0095	-.0313*	-.0550**	-.0805**	.0001	.0167
IIIB14	-.0113	-.0760**	-.0360*	-.0536**	-.0601**	-.0965**	-.0859**	-.0289	-.0496**	-.0817**	.0046
IIIB15	-.0693**	-.0453**	-.0732**	.0219	-.0108	.0325*	.0117	-.0627**	-.0388*	.0519**	.0354*
IIIB16	-.1624**	-.0624**	-.0205	.0179	-.0141	-.0173	-.0586**	-.0280	-.0495**	.0488**	.0673**
IIIB17	-.0095	-.0516**	-.0266	-.0600**	-.0637**	-.0787**	.0084	-.0399*	-.0470**	-.0757**	.0262
IIIC1	-.0482**	-.0612**	.0485**	.0312*	.0100	.0128	.0211	-.0093	.0250	.0873**	.0392*
IIIC2	.0168	-.0038	-.0108	.0218	.0474**	-.0016	.0253	.0032	.0539**	.0094	.0355*
IIIC3	.0449**	.0067	-.0260	.0100	.0258	-.0050	-.0420**	-.0428**	-.0156	-.0075	-.0476**
IIIC4	-.0358*	.0058	-.0598**	-.0048	.0292	-.0120	-.0233	-.0543**	-.0190	-.0245	-.0831**
IIIC5	.0277	.0130	-.0523**	-.0218	-.0066	.0067	-.0448**	-.0260	-.0127	.0067	-.0430**
IIIC6	-.0158	.0254	-.0386*	-.0310	.0166	-.0011	-.0002	-.0193	.0084	.0037	-.0584**
IIIC7	-.1362**	-.0615**	-.0149	.0255	-.0107	.0068	-.0615**	.0006	-.0025	.0478**	.0582**
IIIC8	-.0480**	.0007	-.0446**	.0056	-.0045	.0078	-.0140	-.0196	-.0310	.0064	.0172
IIIC9	-.0354*	-.0233	-.0656**	.0100	.0228	.0466**	.0239	-.0443**	-.0408*	.0606**	.0250

* - Signif. LE .05 ** - Signif. LE .01 (2-tailed) " . " printed if a coefficient cannot be computed

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15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH
12:20:38    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                    - -  Correlation Coefficients  - -

             IIC12     IID1      IID2      IID3      IID4      IID5      IID6      IID7      IID8      IID9      IID10

SEXIND      .0860**  -.0303   -.0377*   -.0560**  -.0351*   -.0272    .0654**   .0851**   .0612**  -.1424**  -.2648**
RACEIND    -.0068    -.0052   -.0368*    .0223    -.0209    -.0352*   -.0176    .0643**   .0104     .0191     .0666**
CHANGIND    .0492**   .0781**   .0200   -.0439**  -.1387**  -.0379*   -.0589**   .1162**   .0787**  -.0302    -.0860**
A1          .0296    -.0150   -.0053    -.0621**  -.1408**  -.0762**  -.1541**   .0589**  -.0240    -.0067    -.0343*
A2          .0564**   .0477**   .0059   -.0323*    .0152    -.0239    -.0285     .0309     .0203    -.0908**  -.0874**
A3         -.0094    -.0554**   .0075   -.0362*   -.0169    -.0575**  -.0012     .0158    -.0120    -.0032     .0126
A4          .1077**   .0810**   .0416**  -.0032   -.0529**   .0301    -.0057     .0284     .0507**   .0194    -.0692**
A5         -.0207     .0112     .0825**   .0988**   .1413**   .0952**   .1140**  -.0931**   .0207     .0646**   .0876**
A6          .0093     .0555**   .0555**   .0336*   -.0419**   .0195     .0252    -.0055     .0504**   .0949**   .0134
A7         -.0802**  -.0027   -.1020**    .0036   -.2807**  -.0722**  -.1390**   .0313*   -.0130     .1019**  -.0816**
A8         -.0183    -.0048   -.0488**  -.0009    -.0051     .0351*   -.0088    -.0047     .0032     .0604**   .1067**
A9          .0313     .0957**   .0643**   .0365*    .0814**   .1050**   .0825**  -.0217     .0322*    .0105     .0324*
A10        -.0050     .0667**   .0094     .0028    -.0251     .0155    -.0614**   .0116     .0133     .0491**  -.0844**
A11         .0383*   -.0221     .0296   -.0211    -.1205**  -.0251    -.0831**   .0182     .0170     .0201    -.0318*
A12         .0322     .0828**   .0442**   .0358*   -.0174     .0292     .0251     .0315*    .0378*    .0781**  -.0484**
A13         .0391*   -.1056**  -.1766**  -.1555**  -.0335*   -.1086**  -.0614**   .0236    -.0725**  -.0849**  -.0233
A14        -.0522**   .0515**   .0166     .1195**  -.0751**   .0154     .0168    -.0445**   .0009     .2995**   .0869**
A15         .0612**  -.0065     .0390*    .0215     .0413**   .0376*    .0499**   .0058     .0155    -.0262    -.0971**
A16        -.0239    -.0925**  -.1304**  -.0852**  -.1090**  -.1067**  -.1256**  -.0437**  -.1024**  -.0384*   -.1097**
A17         .0181     .0949**   .0634**   .0699**   .0024    -.0019     .0499**   .0572**   .0469**  -.0195    -.0502**
A18        -.0378*   -.0699**  -.0309   -.0622**  -.1180**  -.0696**  -.0770**   .0204    -.0624**  -.0463**  -.0487**
A19         .0086     .0304     .0518**   .0193    -.0073    -.0193     .0510**  -.0231    -.0103    -.0013    -.0953**
A20         .0159     .0038     .0074   -.0061     .0563**   .0140     .0131    -.0132     .0046     .0319*    .0014
A21        -.0010    -.0926**  -.1297**  -.1098**  -.0556**  -.1007**  -.0730**   .0158    -.0496**  -.0339*    .0157
A22        -.0761**  -.0028     .1504**   .1575**   .1486**   .1762**   .1364**  -.0577**   .0205     .0974**   .1528**
A23        -.0598**  -.0460**   .0140   -.0363*   -.0715**  -.0584**  -.0054    -.0327*   -.0572**   .0193    -.0032
A24         .0604**   .0753**   .0417**   .0581**   .0493**   .0570**   .0539**   .0747**   .0365*   -.0197    -.0795**
A25         .0314     .0427**   .0170     .0355*    .1108**   .0650**   .0679**   .0656**   .0325*   -.0878**  -.0720**
A26         .0134    -.0001     .0537**   .0192     .0093     .0429**   .0629**   .0560**   .0573**   .0334*   -.0041
A27        -.0237    -.0539**   .0029     .0543**  -.0273    -.0159    -.0570**  -.0474**  -.0589**   .0493**   .0428**
A28        -.0367*   -.0736**  -.0513**  -.0172    -.0463**  -.0307    -.0787**  -.0543**  -.0463**   .0280     .0616**
B1         -.0812**  -.0721**   .0029   -.0230    -.0465**  -.0782**  -.0370*   -.0471**  -.0310     .0300    -.0090
B2         -.0411*   -.0625**  -.0388*  -.0678**  -.0096    -.0682**  -.0537**  -.0728**  -.0398*   -.0004    -.0145
B3         -.0685**  -.0514**  -.0415**   .0045   -.0675**  -.0719**  -.0037    -.0198    -.0367*    .0603**  -.0011
B4         -.0643**  -.0480**  -.0584**  -.0199    -.0535**  -.1048**  -.0461**  -.0312*   -.0706**   .0402*    .0435**
B5         -.0570**  -.0028   -.0108    -.0017    -.0266    -.0838**  -.0245    -.0237    -.0710**   .0924**   .0103
B6         -.0506**  -.0657**  -.0430**  -.0120    -.0282    -.0553**  -.0410**  -.0699**  -.0738**   .0047     .0733**
B7         -.0675**  -.1099**  -.0814**  -.0143    -.0412**  -.0715**  -.0552**  -.0428**  -.0881**   .0305     .1056**
B8          .0056    -.0909**  -.0512**  -.0446**  -.0363*   -.0600**  -.0640**  -.0778**  -.0903**  -.0202     .0837**
B9          .0102    -.0834**  -.0927**  -.0703**  -.0330*   -.0885**  -.0603**  -.0472**  -.0832**  -.0862**  -.0237
B10        -.0462**  -.0717**  -.1066**  -.0217    -.0195    -.0900**  -.0540**  -.0404*   -.0380*   -.0059     .0266
B11        -.0522**  -.0949**  -.1499**  -.0764**  -.0825**  -.1176**  -.0766**  -.0293    -.0840**   .0285     .0453**
B12        -.0273    -.0322*   -.0192    -.0140    -.0156    -.0334*   -.0098    -.0332*   -.0696**   .0136     .0589**
B13        -.0535**  -.0757**  -.1198**  -.0494**  -.1125**  -.1310**  -.0158     .0060    -.0919**   .1022**   .0685**
B14        -.0287    -.0933**  -.1170**  -.0727**  -.0517**  -.0768**  -.0755**  -.0419**  -.0632**   .0172     .0705**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)        " . " printed if a coefficient cannot be computed
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                        - -  Correlation Coefficients  - -

            IIC12      IID1       IID2       IID3       IID4       IID5       IID6       IID7       IID8       IID9       IID10

B15        -.0075     -.0788**   -.0570**   -.0422**   -.0222     -.0563**   -.0444**   -.0408*    -.0797**   -.0264      .0603**
C1          .0284     -.0317*     .0296     -.1742**    .1081**    .0137      .0338*     .0894**    .0287     -.4623**   -.1339**
C2         -.0209     -.0444**   -.1732**   -.0102     -.2107**   -.0903**   -.1647**    .0228     -.0297      .0924**   -.1123**
C3         -.0285     -.0371*    -.1287**   -.0803**    .0369*    -.0537**   -.1234**   -.0268     -.0854**   -.0872**   -.0577**
C4         -.0745**   -.0495**   -.2595**    .0139     -.0053     -.0597**   -.0167     -.0535**   -.0826**    .0389*     .0374*
C5         -.0519**   -.0964**   -.3499**    .0000      .0363*    -.0213      .0064     -.0252     -.0717**    .0519**    .0697**
C6         -.0037     -.0391*    -.0889**   -.0784**    .0642**   -.0392*     .0262      .0016     -.0175     -.1652**   -.0129
C7          .0421*    -.0917**   -.1052**   -.1083**    .0199     -.0846**   -.0685**    .0022     -.0825**   -.2225**   -.1531**
C8          .0196     -.0398*    -.0927**   -.1000**   -.0160     -.0504**   -.1568**    .0318*    -.0175     -.1455**   -.1009**
C9          .0661**    .0126     -.0483**   -.0271      .0059      .0084     -.1321**   -.0017     -.0014     -.0297     -.0413**
C10         .0198     -.0086     -.0197     -.0526**    .0479**   -.0061     -.0259     -.0357*    -.0776**   -.1812**   -.0617**
C11         .0118      .0065     -.0772**   -.0735**   -.0309     -.0374*    -.1688**    .0043     -.0086     -.0168     -.0495**
C12        -.0351*    -.1307**   -.1635**   -.0546**   -.0459**   -.070[illegible]**   -.1202**   -.0668**   -.0779**   -.0093      .0350*
C13        -.0210     -.0960**   -.0783**    .0038     -.0585**   -.0303     -.1069**   -.0972**   -.0880**    .0690**    .0369*
IIA1       -.1179**   -.1234**    .0037      .0668**    .0144      .0729**    .0105     -.0190     -.0320*     .1605**    .2516**
IIA2       -.1508**   -.1291**   -.0188      .0143      .0198      .0054      .0231     -.0076     -.0600**   -.0145      .0456**
IIB1       -.0284      .1376**    .1133**    .0818**   -.0940**    .0688**   -.0435**   -.0388*     .0460**    .2325**   -.0371*
IIB2       -.1578**   -.2341**   -.0046      .1800**    .2265**    .1277**    .1281**   -.4043**   -.2699**    .1819**    .2092**
IIB3        .1122**    .0504**    .2822**   -.2998**    .0049     -.0146     -.0517**    .2101**    .1436**   -.5441**   -.2395**
IIB4        .0728**    .0308      .0917**   -.0963**   -.0917**    .0122     -.3569**    .1281**    .0902**   -.1034**   -.0463**
IIB5        .1260**    .1241**    .0509**   -.0260     -.0341*     .0223     -.1079**    .0687**    .0720**   -.0804**   -.0723**
IIC1       -.1218**   -.0368*     .0716**    .1659**    .1662**    .1710**    .1680**   -.1733**   -.0306      .2544**    .3192**
IIC2       -.1767**   -.1082**    .0232      .0554**    .0689**    .1028**    .0733**    .0451**    .0062     -.0022      .1448**
IIC3       -.0993**    .0828**   -.0325*    -.0210      .0174     -.0183     -.0567**    .1651**    .0839**   -.0696**   -.0236
IIC4       -.0834**    .0296      .0212     -.0358*    -.0203     -.0191     -.0140      .0766**    .0028     -.0694**   -.0119
IIC5       -.0213      .0887**    .0383*    -.0245     -.0287     -.0243      .0315*     .0653**    .0591**   -.0712**   -.0098
IIC6       -.0594**   -.0073     -.0353*     .0178      .0120      .0267      .1000**    .0625**    .0621**   -.0319*     .0217
IIC7       -.0194     -.0029     -.0511**    .0487**    .0676**    .0540**    .0900**    .0192     -.0120     -.0197      .0218
IIC8        .1429**    .0999**    .0308      .0090     -.0149      .0707**   -.0451**    .0915**    .1181**   -.0187      .0205
IIC9        .4467**    .1265**    .0694**   -.0423**    .0000      .0450**    .0151      .1654**    .1826**   -.0979**   -.0352*
IIC10       .2581**    .1428**    .0219     -.1190**   -.1206**   -.0615**   -.1052**    .1451**    .1024**   -.1791**   -.2533**
IIC11       .5590**    .1304**    .0202     -.1180**   -.1025**   -.0687**   -.0282      .1200**    .1162**   -.1556**   -.2116**
IIC12      1.0000      .1091**   -.0008     -.0718**   -.0621**   -.0506**   -.0521**    .0993**    .1225**   -.0674**   -.1186**
IID1        .1091**   1.0000      .1934**    .0084     -.0865**   -.0278     -.0350*     .3581**    .4252**    .0125     -.0877**
IID2       -.0008      .1934**   1.0000      .2211**    .1317**    .2606**    .1469**    .1426**    .1951**    .0004     -.0815**
IID3       -.0718**    .0084      .2211**   1.0000      .2489**    .3792**    .2439**   -.0915**   -.0313*     .4125**    .1372**
IID4       -.0621**   -.0865**    .1317**    .2489**   1.0000      .3385**    .2686**   -.1329**   -.0763**    .0137      .2734**
IID5       -.0506**   -.0278      .2606**    .3792**    .3385**   1.0000      .3332**    .0013      .1380**    .1723**    .0861**
IID6       -.0521**   -.0350*     .1469**    .2439**    .2686**    .3332**   1.0000      .0065      .0824**    .1139**    .1116**
IID7        .0993**    .3581**    .1426**   -.0915**   -.1329**    .0013      .0065     1.0000      .5398**   -.0802**   -.0753**
IID8        .1225**    .4252**    .1951**   -.0313*    -.0763**    .1380**    .0824**    .5398**   1.0000      .0656**   -.0781**
IID9       -.0674**    .0125      .0004      .4125**    .0137      .1723**    .1139**   -.0802**    .0656**   1.0000      .2892**
IID10      -.1186**   -.0877**   -.0815**    .1372**    .2734**    .0861**    .1116**   -.0753**   -.0781**    .2892**   1.0000
IID11       .0363*    -.0312*     .1030**    .1856**    .2048**    .1443**    .2307**    .0842**    .0691**   -.0225     -.0166
IID12       .0057      .0398*     .1106**    .0230      .0187      .1055**    .1205**    .1548**    .2452**    .0862**    .0730**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)        " . " printed if a coefficient cannot be computed
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                              - -  Correlation Coefficients  - -

            IIC12      IID1       IID2       IID3       IID4       IID5       IID6       IID7       IID8       IID9       IID10

IID13      -.0362*     .0646**    .1090**   -.0422**   -.0199      .0050     -.0394*     .2563**    .1741**   -.0697**    .0671**
IID14       .0420*     .2409**    .3949**    .0515**    .0158      .1428**    .0496**    .2785**    .3326**   -.0418**    .0165
IID15       .0288     -.0191      .2475**    .3161**    .2369**    .2688**    .2290**    .0465**    .0440**    .0335*     .0670**
IID16       .0015      .0101      .0899**    .1510**    .1726**    .1131**    .1165**    .0397*     .0109      .0904**    .2817**
IID17      -.0975**    .0265      .0977**    .2272**    .1558**    .1573**    .1067**   -.0760**   -.0295      .3053**    .2695**
IID18      -.0485**    .0227      .0455**    .1351**    .1210**    .2156**    .1103**    .0459**    .1181**    .1824**    .2701**
IID19      -.0754**    .0771**    .1115**    .0127     -.0105      .0897**    .0396*     .2815**    .1875**   -.0348*     .0645**
IID20       .0404*     .1141**    .3883**    .0553**    .0718**    .1566**    .0984**    .0926**    .1638**    .0273     -.0285
IID21       .0038     -.0720**    .2474**    .2842**    .3500**    .3286**    .3013**   -.0372*     .0175     -.0601**    .0037
IID22       .0059      .0250      .2152**    .0656**    .0899**    .2660**    .1059**    .0468**    .1386**    .1229**    .2305**
IIIB1       .0139      .0053      .0729**    .0133      .0201      .0040      .0383*    -.0269      .0014     -.0349*    -.0627**
IIIB2      -.0772**   -.1233**   -.0624**    .1138**    .0762**    .0228     -.0090     -.2612**   -.2050**    .1265**    .0077
IIIB3      -.0004      .0085      .0469**    .0715**    .0594**    .1047**    .0806**   -.0446**    .0236      .0225     -.0476**
IIIB4       .0857**    .1330**    .0920**   -.0411**   -.0810**   -.0157      .0050      .0413**    .0787**   -.0831**   -.1784**
IIIB5       .0359*     .0277     -.1019**   -.0289     -.1940**   -.1260**   -.0860**    .0675**   -.0241     -.0607**   -.1421**
IIIB6       .0377*     .0605**    .0338*    -.0007     -.0[illegible]4      .0616**    .0346*     .0027      .0618**    .0247     -.0744**
IIIB7      -.1387**   -.0546**   -.1350**   -.0504**   -.0523**   -.1099**   -.0883**   -.0849**   -.1325**    .0305     -.0323*
IIIB8       .0485**   -.0089     -.0007     -.0588**   -.0467**   -.0420**   -.0526**   -.0254     -.0460**   -.1150**   -.1291**
IIIB9      -.0462**   -.1025**   -.1135**   -.0464**   -.0725**   -.1159**   -.1799**   -.0112     -.1306**   -.0368*     .0170
IIIB10      .0663**    .0663**   -.0426**   -.1669**   -.2534**   -.1632**   -.1025**    .1240**    .0532**   -.1685**   -.3024**
IIIB11      .0575**    .1231**    .0182     -.0204     -.0511**   -.0693**   -.0652**    .0405*     .0333*    -.0010**   -.1594**
IIIB12     -.0002     -.0256     -.0479**   -.0572**   -.0554**   -.0880**    .0243      .0028     -.0155     -.0313*    -.0649**
IIIB13     -.0046     -.1866**   -.1689**   -.0797**    .0081     -.0984**   -.0951**   -.1201**   -.1626**   -.0521**   -.0125
IIIB14      .0205     -.0319*    -.0303*    -.0351*    -.0249     -.0291     -.0559**    .0135     -.0341*     .0202     -.0042
IIIB15      .0080     -.1313**   -.1412**   -.0195     -.0818**   -.0778**   -.0807**   -.0820**   -.1232**    .0701**   -.0134
IIIB16      .0474**   -.1567**   -.1574**   -.1314**   -.0308*    -.1036**   -.0864**    .0053     -.0835**   -.0947**    .0065
IIIB17      .0339*    -.0387*    -.0224      .0091      .0697**    .0190     -.0220     -.0760**   -.0519**    .0456**   -.0445**
IIIC1       .0267      .0483**   -.0295      .0144     -.0332*    -.0442**   -.0461**    .0074     -.0247     -.0390*    -.0784**
IIIC2       .0312      .0416**   -.0195     -.0002      .0110      .0146      .0185      .0222      .0112     -.0134      .0532**
IIIC3      -.0329*     .0087      .0147      .0052      .0379*     .0158     -.0261     -.0620**   -.0358*    -.0313*    -.0030
IIIC4      -.0127      .0067     -.0212      .0066      .0421**   -.0076      .0251     -.0170      .0135     -.0073      .0019
IIIC5       .0312      .0413**    .0709**    .0316*    -.0142      .0197     -.0264     -.0047      .0103      .0168     -.0271
IIIC6       .0117      .0319*     .0127      .0275     -.0058      .0098      .0168      .0274      .0276      .0397*    -.0020
IIIC7       .0354*    -.0542**   -.1363**   -.0969**    .0151     -.0507**   -.0278      .0119     -.0474**   -.0500**    .0060
IIIC8      -.0263     -.1228**   -.1298**   -.0521**    .0080     -.0934**   -.0697**   -.0771**   -.1377**   -.0242     -.0232
IIIC9       .0144     -.0873**   -.0667**   -.0277     -.0440**   -.0899**   -.0565**   -.0422**   -.0932**    .0174     -.0144

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH
SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

- - Correlation Coefficients - -

	IID11	IID12	IID13	IID14	IID15	IID16	IID17	IID18	IID19	IID20	IID21
SEXIND	.1797**	.0106	-.0632**	-.0327*	.0664**	-.0522**	-.1760**	-.1872**	.0131	-.0096	.0743**
RACEIND	.0049	.0253	.1137**	.0301	.0053	.0455**	.0556**	-.0144	.1028**	-.0292	-.0404*
CHANGIND	.0086	.0347*	.0646**	.0448**	-.0329*	-.0174	-.0434**	-.0641**	.0251	.0255	-.0376*
A1	-.0621**	-.1130**	.0035	-.0755**	-.0466**	-.0169	-.0675**	-.0990**	-.0215	.0171	-.0957**
A2	.0307	-.0726**	-.0333*	-.0259	.0283	-.0361*	-.0630**	-.0611**	-.0260	-.0144	.0579**
A3	.0093	.0133	.0293	-.0200	.0310	.0457**	-.0398*	-.0004	-.0560**	.0443**	-.0182
A4	-.0136	.0690**	-.0440**	.0361*	.0137	-.0043	-.0001	-.0175	-.0097	.0615**	.0340*
A5	.0122	.0726**	-.0554**	.0699**	.0640**	.0209	.1051**	.0919**	-.0162	.0923**	.1296**
A6	-.0222	.0932**	-.0229	.0028	.0056	.0218	.0928**	.0983**	-.0779**	.0950**	.0350*
A7	-.0565**	-.0773**	.0202	-.0636**	-.1345**	-.0952**	-.0559**	-.0719**	-.0129	-.0409*	-.2053**
A8	-.0322*	.0195	-.0108	.0126	-.0410**	-.1063**	.1002**	.0752**	.1090**	-.0415**	-.0868**
A9	.0410**	.0673**	-.0081	.0563**	.0455**	.0123	.0407*	.0462**	-.0155	.0699**	.1102**
A10	-.0825**	-.0703**	-.0868**	-.0598**	-.0626**	-.0872**	-.0024	-.0254	-.1136**	.0257	.0056
A11	.0104	-.1020**	.0210	-.0038	.0096	-.0333*	-.0085	-.0558**	-.1054**	.0563**	-.0278
A12	-.0067	.0707**	-.0303	.0394*	.0043	-.0233	.0088	.0050	-.0098	.0473**	.0339*
A13	-.0402*	-.1064**	-.0406*	-.1402**	-.1016**	.0023	-.1186**	-.0897**	-.0261	-.0962**	-.1150**
A14	-.0525**	-.0011	.0098	-.0253	-.0022	-.0265	.1020**	.0564**	-.0181	.0463**	-.0350*
A15	.0681**	.0354*	-.0201	.0256	.0426**	-.0127	-.0387*	.0095	.0154	-.0009	.0881**
A16	-.0220	-.1434**	-.0535**	-.1780**	-.0909**	-.0767**	-.1003**	-.0982**	-.1082**	-.1140**	-.0746**
A17	.1068**	.0152	.0900**	.1155**	.1170**	.0032	.0450**	.0199	.0453**	.0073	.1120**
A18	-.0263	-.0861**	.0500**	-.0605**	-.0699**	-.0043	-.0708**	-.0856**	-.0256	-.0598**	-.1049**
A19	.0357*	-.0111	-.0657**	-.0297	.0323*	.0016	.0322*	.0089	-.0441**	.0120	.0463**
A20	-.0243	-.0247	-.0563**	-.0586**	-.0070	-.0180	.0788**	-.0032	.0346*	-.0188	.0280
A21	-.0828**	-.0937**	.0024	-.1019**	-.0921**	-.0069	-.0879**	-.0706**	-.0104	-.0596**	-.1043**
A22	-.0431**	.0515**	-.0393*	.0760**	.0751**	.0516**	.1475**	.1321**	.0481**	.0881**	.1909**
A23	-.0666**	-.0327*	.0193	-.0342*	-.0553**	-.0635**	.0261	.0382*	-.0577**	.0050	-.0159
A24	.0916**	-.0089	-.0113	.0626**	.0868**	.0112	-.0127	-.0192	.0188	.0272	.1173**
A25	.0540**	.0145	-.0496**	.0138	.0486**	.0183	-.0700**	-.0156	.0261	.0327*	.0961**
A26	.0007	.1084**	.0066	.0169	.0073	.0270	.0211	.0778**	.0203	.0763**	.0440**
A27	.0130	-.0086	-.0737**	-.0499**	-.0034	.0368*	.0211	.0000	-.1072**	.0213	-.0754**
A28	-.0972**	-.0247	.0324*	-.0434**	-.0295	-.0039	.0441**	.0273	-.0054	-.0471**	-.0805**
B1	-.0410**	-.0167	.0156	-.0224	-.0598**	-.0321*	.0075	-.0192	-.0730**	.0211	-.0466**
B2	-.1132**	-.0628**	-.0453**	-.0772**	-.0874**	-.0249	-.0352*	-.0268	-.0976**	-.0031	-.0729**
B3	-.0193	-.0463**	-.0423**	-.0774**	-.0752**	-.0354*	.0007	.0044	-.0707**	-.0435**	-.0062
B4	-.0476**	-.0382*	.0147	-.0565**	-.0448**	-.0073	.0254	-.0102	-.0318*	-.1038**	-.1233**
B5	-.0598**	-.0231	-.0493**	-.0771**	-.0341*	-.0163	.0632**	.0190	-.1204**	-.0200	-.0928**
B6	-.0392*	-.0630**	.0442**	-.0773**	-.0364*	-.0099	.0332*	.0199	-.0226	-.0426**	-.0958**
B7	-.0528**	-.0752**	.0627**	-.0564**	-.0627**	-.0244	.0020	-.0111	-.0223	-.0526**	-.1345**
B8	-.0635**	-.0188	-.0332*	-.0810**	-.0629**	-.0040	.0092	-.0063	-.0147	-.0290	-.0866**
B9	.0117	-.0665**	-.0091	-.0487**	.0008	-.0347*	-.0729**	-.0963**	-.1263**	-.0713**	-.0016
B10	.0089	-.0189	.0000	-.0619**	-.0385*	-.0665**	-.0663**	-.0336*	-.0961**	-.0995**	-.0574**
B11	-.0139	-.0453**	.0024	-.0893**	-.0887**	-.0433**	-.0020	-.0194	-.0811**	-.1130**	-.1218**
B12	-.0399*	-.0250	.0141	-.0155	-.0104	-.0325*	.0414**	.0108	-.0653**	-.0235	-.0366*
B13	-.0164	-.0395*	-.0008	-.1213**	-.0870**	-.0311	.0108	-.0077	-.0601**	-.1360**	-.1508**
B14	-.0703**	-.0452**	-.0571**	-.0893**	-.0826**	-.0315*	.0195	-.0429**	-.0479**	-.0794**	-.1321**

* - Signif. LE .05   ** - Signif. LE .01   (2-tailed)   " . " printed if a coefficient cannot be computed

15-Oct-91 CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH
12:20:38 SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

- - Correlation Coefficients - -

	IID11	IID12	IID13	IID14	IID15	IID16	IID17	IID18	IID19	IID20	IID21
B15	-.0292	-.0411**	-.0388*	-.0861**	-.0503**	-.0154	.0244	-.0368*	-.0128	-.0463**	-.0935**
C1	.1224**	-.0456**	.1239**	.0761**	.0534**	.0245	-.0885**	-.0708**	.0096	.0234	.1213**
C2	-.0376*	-.1383**	-.0328*	-.1303**	-.1294**	-.0651**	-.0765**	-.1206**	-.1164**	-.1471**	-.1646**
C3	-.0059	-.0603**	-.0095	-.1107**	-.0298	.0230	.0306	-.0503**	-.0879**	-.0874**	-.0387*
C4	.0243	-.1499**	-.0448**	-.1045**	-.0509**	.0050	.0062	-.0126	-.0410**	-.3939**	-.1042**
C5	.0497**	-.0597**	-.0625**	-.1420**	-.0494**	-.0240	-.0228	-.0530**	-.0478**	-.2513**	-.0340*
C6	.0475**	-.1434**	.0833**	-.0366*	.0125	.0175	-.0637**	-.0856**	-.0281	-.0710**	.0006
C7	.0976**	-.1966**	-.0348*	-.0970**	-.0176	-.0162	-.1606**	-.2308**	-.1139**	-.0531**	.0135
C8	-.0375*	-.0678**	-.0247	-.0799**	-.0713**	-.0678**	-.0708**	-.0653**	-.1040**	-.0080	-.0519**
C9	-.0924**	-.0617**	-.0385*	-.0697**	-.0544**	-.0149	.0009	-.0137	-.1295**	.0564**	.0048
C10	.0453**	-.3241**	-.0597**	-.0573**	-.0207	-.0307	-.1091**	-.1332**	-.0954**	-.0545**	.0461**
C11	-.0694**	.0439**	-.0268	-.0284	-.0598**	-.0229	.0913**	.0038	-.0510**	-.0119	-.0551**
C12	-.0420**	-.0793**	-.0739**	-.1518**	-.0883**	.0071	-.0560**	-.0331*	-.1069**	-.0779**	-.1366**
C13	-.0057	-.1039**	-.1277**	-.1379**	-.0430**	-.0163	-.0131	-.0248	-.1553**	-.0201	-.0792**
IIA1	-.1135**	.0954**	.1219**	.0632**	.0013	.0095	.1581**	.1416**	.2033**	-.0034	-.0493**
IIA2	.0235	-.0284	.1620**	.0519**	.0562**	.0045	.0044	.0153	.1465**	-.0447**	.0099
IIB1	-.0643**	-.0142	-.0515**	.0230	.0013	-.0275	.0891**	-.0169	-.0735**	.1628**	.0017
IIB2	-.0183	-.0725**	-.2140**	-.2290**	.0372*	.0839**	.1567**	.1080**	-.1852**	.0467**	.1402**
IIB3	.0622**	.0283	.1412**	.1953**	.0647**	-.0112	-.1925**	-.1072**	.0799**	.2051**	.0936**
IIB4	-.0903**	-.0122	.1049**	.1017**	-.0632**	-.0280	-.0306	.0534**	.0125	.0410**	-.0665**
IIB5	.0016	-.1171**	-.1377**	-.0511**	-.0652**	-.0337*	-.0297	-.0567**	-.1128**	.0513**	.0198
IIC1	-.1062**	.1150**	-.0263	.0204	.0067	.0458**	.2218**	.2497**	.0285	.0765**	.0606**
IIC2	.0364*	.1246**	.2379**	.1476**	.0751**	.0527**	.1076**	.1425**	.3389**	-.0160	.0048
IIC3	.0215	.0046	.0503**	.0604**	-.0235	.0111	-.0374*	-.0571**	.0413**	-.0549**	-.0175
IIC4	.0094	.0019	.0739**	.0343*	-.0124	.0739**	-.0129	-.0701**	.0662**	-.0371*	-.0224
IIC5	-.0462**	.0272	.0277	.0482**	-.0065	.0365*	.0106	-.0077	.0174	.0468**	.0172
IIC6	.0523**	.1096**	.1344**	.0695**	.0505**	.0395*	.0177	.0122	.2241**	-.0042	.0462**
IIC7	.0920**	-.0061	.0192	.0181	.0988**	.0322*	-.0068	-.0036	.1173**	-.0496**	.0937**
IIC8	-.0975**	.0917**	.0571**	.1049**	-.0669**	.0237	.0017	.1341**	.0766**	.0593**	.0221
IIC9	.0708**	.0774**	.0922**	.1397**	.0640**	.0781**	-.0819**	-.0381*	.0902**	.1037**	.0632**
IIC10	.0388*	-.0571**	.0007	.0236	.0074	.0267	-.1567**	-.1239**	.0174	.0145	.0058
IIC11	.0414*	-.0260	-.0499**	.0071	.0073	-.0096	-.1209**	-.0951**	-.0545**	.0555**	.0013
IIC12	.0363*	.0057	-.0362*	.0420*	.0288	.0015	-.0975**	-.0485**	-.0754**	.0404*	.0038
IID1	-.0312*	.0398*	.0646**	.2409**	-.0191	.0101	.0265	.0227	.0771**	.1141**	-.0720**
IID2	.1030**	.1106**	.1090**	.3949**	.2475**	.0899**	.0977**	.0455**	.1115**	.3883**	.2474**
IID3	.1856**	.0230	-.0422**	.0515**	.3161**	.1510**	.2272**	.1351**	.0127	.0553**	.2842**
IID4	.2048**	.0187	-.0199	.0158	.2369**	.1726**	.1558**	.1210**	-.0105	.0718**	.3500**
IID5	.1443**	.1055**	.0050	.1428**	.2688**	.1131**	.1573**	.2156**	.0897**	.1566**	.3286**
IID6	.2307**	.1205**	-.0394*	.0496**	.2290**	.1165**	.1067**	.1103**	.0396*	.0984**	.3013**
IID7	.0842**	.1548**	.2563**	.2785**	.0465**	.0397*	-.0760**	.0459**	.2815**	.0926**	-.0372*
IID8	.0691**	.2452**	.1741**	.3326**	.0440**	.0109	-.0295	.1181**	.1875**	.1638**	.0175
IID9	-.0225	.0862**	-.0697**	-.0418**	.0335*	.0904**	.3053**	.1824**	-.0348*	.0273	-.0601**
IID10	-.0166	.0730**	.0671**	.0165	.0670**	.2817**	.2695**	.2701**	.0645**	-.0285	.0037
IID11	1.0000	.0940**	.0920**	.1089**	.3876**	.1570**	.0866**	-.0219	.0550**	.0971**	.2897**
IID12	.0940**	1.0000	.2289**	.2025**	.0843**	.1146**	.1312**	.2586**	.2058**	.1850**	.0264

* - Signif. LE .05 ** - Signif. LE .01 (2-tailed) " . " printed if a coefficient cannot be computed

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                        - -  Correlation Coefficients  - -

          IID11     IID12     IID13     IID14     IID15     IID16     IID17     IID18     IID19     IID20     IID21

IID13     .0920**   .2289**  1.0000     .3851**   .1001**   .1439**   .0491**   .1415**   .3359**   .0660**  -.0331*
IID14     .1089**   .2025**   .3851**  1.0000     .2823**   .1522**   .1064**   .1421**   .2811**   .2006**   .1079**
IID15     .3876**   .0843**   .1001**   .2823**  1.0000     .4056**   .2269**   .1090**   .1294**   .1731**   .4133**
IID16     .1570**   .1146**   .1439**   .1522**   .4056**  1.0000     .2178**   .1883**   .0602**   .0803**   .1250**
IID17     .0866**   .1312**   .0491**   .1064**   .2269**   .2178**  1.0000     .3517**   .0851**   .1269**   .0845**
IID18    -.0219     .2586**   .1415**   .1421**   .1090**   .1883**   .3517**  1.0000     .2248**   .0888**   .0838**
IID19     .0550**   .2058**   .3359**   .2811**   .1294**   .0602**   .0851**   .2248**  1.0000     .1111**   .0162
IID20     .0971**   .1850**   .0660**   .2006**   .1731**   .0803**   .1269**   .0888**   .1111**  1.0000     .3246**
IID21     .2897**   .0264    -.0331*    .1079**   .4133**   .1250**   .0845**   .0838**   .0162     .3246**  1.0000
IID22    -.0694**   .1785**   .1062**   .2144**   .1492**   .1166**   .2016**   .2765**   .1488**   .2505**   .2923**
IIIB1     .0353*   -.0327*   -.0342*    .0134     .0665**   .1191**  -.0494**  -.0457**  -.0872**   .1048**   .0814**
IIIB2    -.0368*   -.0913**  -.1584**  -.1784**  -.0120    -.0112    -.0101    -.0156    -.1928**  -.0245     .0381*
IIIB3    -.0112     .0191    -.1300**  -.0126    -.0154    -.0606**   .0216     .0151    -.0388*    .0554**   .0759**
IIIB4     .0370*   -.0573**  -.0436**   .0071     .0039     .0173    -.1246**  -.0909**  -.1098**   .0846**   .0477**
IIIB5     .0062    -.0641**   .0356*   -.0763**  -.0524**  -.0116    -.1146**  -.1112**  -.0713**  -.1576**  -.1671**
IIIB6     .0164     .0464**  -.0392*    .0470**   .0060    -.0750**   .0399*   -.0001    -.0001     .0535**   .0147
IIIB7    -.0706**  -.1246**  -.0330*   -.1591**  -.0684**  -.0354*    .0114     .0005    -.1349**  -.0967**  -.1232**
IIIB8     .0082    -.1032**  -.0777**  -.0481**   .0404*   -.0078     .0042    -.0525**  -.1169**  -.0020     .0148
IIIB9    -.0494**  -.1111**   .0894**  -.0625**  -.0089     .0082    -.0027    -.0177    -.0105    -.1627**  -.1546**
IIIB10    .0588**  -.0353*   -.0001    -.0274    -.0653**  -.0926**  -.2180**  -.2215**  -.0393*   -.0367*   -.0981**
IIIB11    .0209    -.0920**  -.0853**  -.0603**  -.0273    -.0127    -.1012**  -.1362**  -.1997**   .0330*    .0087
IIIB12    .0401*   -.0182    -.0946**  -.0647**  -.0502**  -.0232    -.0534**  -.0802**  -.1137**  -.0099    -.0458**
IIIB13   -.0235    -.1133**  -.0805**  -.2122**  -.0542**  -.0316*   -.0714**  -.0894**  -.1164**  -.0937**  -.0416**
IIIB14   -.0560**   .0125    -.0732**  -.0789**  -.0064     .0218     .0103     .0275    -.0205    -.0379*   -.0485**
IIIB15   -.0147    -.0601**   .0075    -.1391**  -.0248    -.0152    -.0439**  -.0685**  -.0607**  -.0287    -.0464**
IIIB16   -.0529**  -.1153**  -.0531**  -.1507**  -.1133**   .0059    -.0997**  -.0856**  -.0730**  -.1187**  -.1266**
IIIB17    .0124    -.0520**  -.1276**  -.0885**  -.0146    -.0634**  -.0006    -.0524**  -.1389**  -.0158     .0410**
IIIC1    -.0054    -.0580**  -.0350*   -.0261     .0152    -.0095    -.0398*   -.0581**  -.0522**  -.0430**   .0047
IIIC2    -.0051    -.0389*   -.0247    -.0113     .0109    -.0329*    .0356*   -.0128    -.0099    -.0147    -.0083
IIIC3    -.0135    -.0250     .0145    -.0607**  -.0326*   -.0493**   .0013    -.0443**  -.0342*    .0571**  -.0250
IIIC4     .0653**  -.0147     .0689**   .0095     .0105     .0101    -.0188    -.0084    -.0305    -.0087    -.0285
IIIC5     .0058    -.0429**   .0401*   -.0052     .0279    -.0264     .0208    -.0159    -.0290     .0416**  -.0446**
IIIC6     .0675**  -.0321*    .0488**   .0033     .0440**   .0263    -.0134    -.0275    -.0049     .0387*    .0026
IIIC7    -.0163    -.1148**  -.0544**  -.1271**  -.0514**   .0050    -.0522**  -.0606**  -.0558**  -.0928**  -.0848**
IIIC8    -.0038    -.0926**  -.0359*   -.1046**  -.0179     .0297    -.0428**  -.0603**  -.0421**  -.0460**  -.0479**
IIIC9    -.0163    -.0803**  -.0178    -.1117**   .0197     .0262    -.0247    -.0572**  -.0204    -.0027    -.0163

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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BEST COPY AVAILABLE

15-Oct-91 CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH
12:20:38 SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

- - Correlation Coefficients - -

	IID22	IIIB1	IIIB2	IIIB3	IIIB4	IIIB5	IIIB6	IIIB7	IIIB8	IIIB9	IIIB10
SEXIND	-.1470**	-.0108	-.0814**	.0368*	.0333*	.0355*	.0159	-.0682**	.0192	-.0572**	.1216**
RACEIND	.0189	-.0249	-.0458**	-.1059**	-.0537**	.0375*	-.0569**	.0119	-.0325*	.0748**	-.0287
CHANGIND	.0044	.0305	-.1369**	.0158	.0975**	.1085**	.0489**	-.0398*	.0628**	.0026	.1497**
A1	-.0628**	.0316*	-.0467**	-.1856**	.0099	.1432**	-.0708**	.1069**	.0368*	.2740**	.0996**
A2	-.0797**	-.0373*	-.0462**	-.0309	.0174	-.0098	.0519**	.0012	.0363*	.0283	.0325*
A3	-.0094	.0880**	.0504**	-.0615**	.0506**	.0730**	-.0203	.0717**	.0610**	.0778**	.0453**
A4	.0505**	-.0067	-.0245	.1449**	.0611**	-.0429**	.1317**	-.1153**	.0034	-.1568**	.0713**
A5	.1468**	-.0371*	.0640**	.1806**	-.0531**	-.2256**	.0757**	-.1164**	-.0873**	-.2280**	-.1633**
A6	.1034**	-.0357*	.0160	.0612**	.0054	-.0591**	.0972**	-.0161	.0048	-.0729**	-.0395*
A7	-.1584**	.0061	-.0078	-.1247**	.0237	.2194**	-.0412**	.1393**	-.0008	.1645**	.1586**
A8	.0429**	-.4953**	-.0450**	.0301	-.3939**	-.0944**	.0091	-.0416**	-.1340**	.0305	-.1264**
A9	.1158**	-.0093	.0302	.1086**	.0062	-.1536**	.1513**	-.2012**	-.0535**	-.2724**	-.0637**
A10	-.0122	-.0453**	.0368*	.0127	.0344*	.0172	.0254	.0731**	-.0092	-.0120	.0341*
A11	-.0143	.0224	.0637**	-.0783**	.0990**	.0855**	.0461**	.0726**	.1033**	.0975**	.0887**
A12	.0283	-.0649**	.0151	.1060**	-.0199	-.0792**	.0244	-.1179**	-.1141**	-.1511**	-.0239
A13	-.1287**	.0404*	-.0096	-.1068**	.0179	.1107**	-.0527**	.1556**	.0318*	.1599**	.1398**
A14	.0065	-.0219	.0654**	.0691**	-.0706**	-.0378*	.0563**	.0050	-.1129**	-.0737**	-.0583**
A15	-.0211	-.0410**	-.0105	.1200**	-.0353*	-.0444**	.1072**	-.0810**	-.0852**	-.1034**	.0105
A16	-.2029**	.0249	.0380*	-.2068**	.0599**	.2409**	-.1062**	.3785**	.1182**	.2858**	.1571**
A17	-.0118	-.0829**	-.1050**	.0982**	-.0095	-.0215	.1129**	-.1081**	-.0143	-.1306**	.0133
A18	-.0787**	.0379*	.0076	-.2331**	.0217	.1588**	-.0733**	.1794**	.1122**	.2796**	.1348**
A19	.0058	-.0544**	-.0445**	.1190**	.0007	.0119	.0742**	-.0776**	.0475**	-.1167**	.0397*
A20	.0515**	-.0379*	-.0332*	.0974**	-.0731**	-.0798**	.0445**	-.1117**	-.0418**	-.0650**	-.0813**
A21	-.0688**	.0465**	.0004	-.1390**	.0333*	.1314**	-.0724**	.1632**	.0508**	.1869**	.1066**
A22	.2353**	-.0537**	.0624**	.1783**	-.1369**	-.2641**	.0671**	-.1847**	-.0803**	-.1794**	-.2704**
A23	-.0183	.0264	.0445**	-.0977**	.0245	.0976**	-.0603**	.1731**	.1013**	.1266**	.0231
A24	.0035	-.0676**	-.0852**	.1761**	-.0191	-.0871**	.1230**	-.1640**	-.0440**	-.1545**	.0084
A25	-.0090	-.0076	-.0434**	.1480**	.0162	-.0735**	.0568**	-.1348**	-.0327*	-.1234**	.0267
A26	.0639**	-.0417**	.0199	.0838**	-.0121	-.0889**	.0526**	-.0601**	-.0650**	-.1178**	-.0176
A27	-.0579**	-.0010	.0827**	-.0794**	-.0063	.0168	-.0685**	.1028**	.0581**	.0888**	-.0007
A28	.0204	-.0072	.0470**	-.0531**	-.0566**	.0358*	-.0787**	.1033**	.0345*	.0973**	-.0443**
B1	-.0551**	.0475**	.0212	-.1075**	.0354*	.1412**	-.0583**	.1600**	.0810**	.1784**	.0532**
B2	-.0403*	.0605**	.0350*	-.0976**	.0588**	.0276	-.1059**	.1328**	.0913**	.1396**	.0807**
B3	-.0433**	.0843**	.0656**	-.0389*	.0709**	.0708**	-.0314*	.1054**	.1037**	.1035**	-.0033
B4	-.0314*	-.0197	.0228	-.1231**	-.0115	.0720**	-.0674**	.1010**	.0429**	.0974**	.0214
B5	-.0763**	.0382*	.0489**	-.1119**	.0505**	.0824**	-.0064	.1418**	.0952**	.1264**	.0423**
B6	.0006	.0838**	.0714**	-.0949**	.0592**	.0723**	-.0290	.1404**	.0923**	.1264**	.0564**
B7	-.0360*	.0755**	.0247	-.1590**	.0580**	.1343**	-.0745**	.1910**	.0866**	.2027**	.0481**
B8	.0008	.0671**	.0386*	-.0924**	.0114	.0527**	-.1384**	.1129**	.0064	.1376**	.0071
B9	-.0985**	.0417**	.0238	-.0526**	.0539**	.0509**	-.0108	.0751**	.1063**	.0739**	.1001**
B10	-.0692**	.0848**	.0300	-.0935**	.0251	.0814**	-.0694**	.0914**	.0362*	.1321**	.0279
B11	-.1059**	.0125	-.0386*	-.1157**	-.0079	.1392**	-.0545**	.1132**	.0574**	.1119**	.0752**
B12	-.0162	-.0161	-.0019	-.1015**	.0181	.0925**	-.0664**	.1094**	.0835**	.0945**	.0597**
B13	-.1118**	-.0100	-.0354*	-.0766**	.0002	.1602**	-.0798**	.1262**	.0808**	.0731**	.0772**
B14	-.0329*	.0225	.0563**	-.1023**	-.0058	.0853**	-.0911**	.1844**	.0882**	.1608**	.0530**

* - Signif. LE .05 ** - Signif. LE .01 (2-tailed) " . " printed if a coefficient cannot be computed

CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH
SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

- - Correlation Coefficients - -

	IID22	IIIB1	IIIB2	IIIB3	IIIB4	IIIB5	IIIB6	IIIB7	IIIB8	IIIB9	IIIB10
B15	-.0200	.0750**	.0457**	-.1363**	.0693**	.1054**	-.1180**	.1397**	.0566**	.1706**	.0362*
C1	-.0680**	.0330*	-.0854**	-.0182	.0714**	.0548**	.0199	.0175	.0820**	.0506**	.0979**
C2	-.1938**	.0211	.0308	-.0793**	.0487**	.2186**	-.0636**	.1561**	.0256	.1617**	.1477**
C3	-.0545**	.0343*	.1089**	-.0558**	.0677**	.1111**	-.0407*	.1300**	.1372**	.1877**	.0782**
C4	-.1014**	.0069	.0174	-.0426**	.0144	.1205**	-.0261	.1092**	.0578**	.1337**	-.0117
C5	-.0950**	.0039	.0494**	-.0355*	-.0317*	.0591**	-.0093	.0880**	.0306	.0536**	.0140
C6	-.0955**	.0745**	-.0858**	-.0223	.0830**	.0875**	-.0363*	.0813**	.0501**	.0686**	.0800**
C7	-.2401**	.0886**	-.0038	-.0835**	.0544**	.1318**	-.0439**	.1465**	.0647**	.1353**	.1283**
C8	-.0923**	.0231	.0882**	-.1310**	.0280	.0765**	-.0350*	.1212**	.1235**	.2218**	.1025**
C9	-.0268	.0465**	.1528**	-.0643**	.0586**	.0420**	-.0680**	.1001**	.0949**	.0983**	.0348*
C10	-.1149**	.0824**	.0092	-.0490**	.1111**	.1089**	-.0652**	.1463**	.0807**	.1635**	.0826**
C11	.0212	-.0621**	.0673**	-.0743**	.0064	.0172	-.0098	.0628**	.0844**	.1512**	.0646**
C12	-.0797**	.0419**	.0746**	-.1275**	-.0102	.1103**	-.1579**	.1860**	.0696**	.2229**	.0700**
C13	-.0880**	.0452**	.1518**	-.0834**	.0616**	.0920**	-.0581**	.1306**	.0951**	.1374**	.0332*
IIA1	.1666**	-.1989**	.0035	-.0147	-.3778**	-.1603**	-.0247	-.0841**	-.1925**	.0337*	-.1933**
IIA2	.0379*	.0174	-.0187	-.1272**	-.1011**	.0231	-.0840**	.0572**	-.0601**	.1077**	-.0493**
IIB1	.0943**	.0767**	.1544**	.0370*	.0955**	-.0562**	.0056	.0296	-.0810**	-.0508**	.0298
IIB2	.0974**	.0655**	.3219**	.0858**	-.0094	-.1157**	.0459**	.0260	.0269	-.0618**	-.2173**
IIB3	.0021	.0166	-.1820**	.0033	.0818**	.0080	-.0077	-.0545**	.0608**	-.0184	.1332**
IIB4	.0985**	.0086	-.0850**	.0130	.0008	-.0095	-.0306	.0294	.0371*	.0434**	.0835**
IIB5	-.0252	.0418**	-.0026	.1083**	.1202**	-.0248	.0515**	-.0369*	.0571**	-.0866**	.0566**
IIC1	.2584**	-.0396*	.1133**	.1208**	-.1305**	-.2592**	.0439**	-.1337**	-.1081**	-.1621**	-.3906**
IIC2	.1209**	-.0928**	-.1111**	-.0568**	-.1892**	-.0589**	.0232	-.0775**	-.1339**	.0277	-.1475**
IIC3	-.0452**	-.0107	-.1460**	.0545**	-.0175	.0068	.0309	-.0611**	-.0431**	-.0372*	-.0521**
IIC4	-.0186	-.0144	-.1134**	-.0229	-.0186	.0220	-.0065	.0069	-.0609**	.0463**	.0470**
IIC5	.0283	-.0252	-.0353*	-.0351*	-.0190	-.0099	-.0236	-.0632**	-.0215	-.0560**	.0170
IIC6	.0240	-.0374*	-.0907**	-.0004	-.1178**	-.0095	.0218	-.1279**	-.2571**	-.0283	-.0510**
IIC7	-.0163	-.0518**	-.0146	.0386*	-.1140**	-.0340*	.0328*	-.0820**	-.1228**	-.0645**	-.0842**
IIC8	.1349**	-.0092	-.0809**	.0454**	.0354*	-.0726**	.0523**	-.1136**	-.0603**	-.0882**	-.0517**
IIC9	.0750**	-.0882**	-.1985**	.0502**	-.0083	-.0653**	.0751**	-.3331**	-.0615**	-.1839**	.0023
IIC10	-.1118**	.0540**	-.0540**	-.0629**	.1337**	.1666**	-.0078	-.0233	.0587**	.0249	.2477**
IIC11	-.0752**	.0421*	-.0737**	.0054	.1263**	.0723**	-.0165	-.1140**	.0321	-.0275	.1518**
IIC12	.0059	.0139	-.0772**	-.0004	.0857**	.0359*	.0377*	-.1387**	.0485**	-.0462**	.0663**
IID1	.0250	.0053	-.1233**	.0085	.1330**	.0277	.0605**	-.0546**	-.0089	-.1025**	.0663**
IID2	.2152**	.0729**	-.0624**	.0469**	.0920**	-.1019**	.0338*	-.1350**	-.0007	-.1135**	-.0426**
IID3	.0656**	.0133	.1138**	.0715**	-.0411**	-.0289	-.0007	-.0504**	-.0588**	-.0464**	-.1669**
IID4	.0899**	.0201	.0762**	.0594**	-.0810**	-.1948**	-.0244	-.0523**	-.0467**	-.0725**	-.2534**
IID5	.2660**	.0040	.0228	.1047**	-.0157	-.1268**	.0616**	-.1099**	-.0420**	-.1159**	-.1632**
IID6	.1059**	.0383*	-.0090	.0806**	.0050	-.0860**	.0346*	-.0883**	-.0526**	-.1799**	-.1825**
IID7	.0468**	-.0269	-.2612**	-.0446**	.0413**	.0675**	.0027	-.0849**	-.0254	-.0112	.1240**
IID8	.1386**	.0014	-.2050**	.0236	.0787**	-.0241	.0618**	-.1325**	-.0468**	-.1306**	.0532**
IID9	.1229**	-.0349*	.1265**	.0225	-.0831**	-.0607**	.0247	.0305	-.1158**	-.0368*	-.1685**
IID10	.2305**	-.0627**	.0077	-.0476**	-.1784**	-.1421**	-.0744**	-.0323*	-.1291**	.0170	-.3024**
IID11	-.0694**	.0353*	-.0368*	-.0112	.0370*	.0062	.0164	-.0706**	.0082	-.0494**	.0588**
IID12	.1785**	-.0327*	-.0913**	.0191	-.0573**	-.0641**	.0464**	-.1246**	-.1032**	-.1111**	-.0353*

* - Signif. LE .05   ** - Signif. LE .01   (2-tailed)   " . " printed if a coefficient cannot be computed

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                        - -  Correlation Coefficients  - -

             IID22      IIIB1      IIIB2      IIIB3      IIIB4      IIIB5      IIIB6      IIIB7      IIIB8      IIIB9      IIIB10

IID13        .1062**   -.0342*    -.1584**   -.1300**   -.0436**    .0356*    -.0392*    -.0330*    -.0777**    .0894**   -.0001
IID14        .2144**    .0134     -.1784**   -.0126      .0071     -.0763**    .0470**   -.1591**   -.0481**   -.0625**   -.0274
IID15        .1492**    .0665**   -.0120     -.0154      .0039     -.0524**    .0060     -.0684**    .0404*    -.0089     -.0653**
IID16        .1166**    .1191**   -.0112     -.0606**    .0173     -.0116     -.0750**   -.0354*    -.0078      .0082     -.0926**
IID17        .2016**   -.0494**   -.0101      .0216     -.1246**   -.1146**    .0399*     .0114      .0042     -.0027     -.2180**
IID18        .2765**   -.0457**   -.0156      .0151     -.0909**   -.1112**   -.0001      .0005     -.0525**   -.0177     -.2215**
IID19        .1488**   -.0872**   -.1928**   -.0388*    -.1098**   -.0713**   -.0001     -.1349**   -.1169**   -.0105     -.0393*
IID20        .2505**    .1048**   -.0245      .0554**    .0846**   -.1576**    .0535**   -.0967**   -.0020     -.1627**   -.0367*
IID21        .2923**    .0814**    .0381*     .0759**    .0477**   -.1671**    .0147     -.1232**    .0148     -.1546**   -.0981**
IID22       1.0000      .0198      .0160      .0879**   -.0350*    -.2226**    .0731**   -.1800**   -.0643**   -.1547**   -.1996**
IIIB1        .0198     1.0000      .1600**    .0275      .5066**    .1538**    .0274      .1226**    .1766**   -.0123      .0636**
IIIB2        .0160      .1600**   1.0000      .0299      .1126**    .0120     -.0207      .1516**    .0538**    .0401*    -.0282
IIIB3        .0879**    .0275      .0299     1.0000      .0532**   -.2143**    .2218**   -.2493**   -.0775**   -.4846**   -.0382*
IIIB4       -.0350*     .5066**    .1126**    .0532**   1.0000      .2555**    .0734**    .0988**    .3598**   -.0528**    .2452**
IIIB5       -.2226**    .1538**    .0120     -.2143**    .2555**   1.0000      .0087      .3312**    .2759**    .3096**    .2763**
IIIB6        .0731**    .0274     -.0207      .2218**    .0734**    .0087     1.0000     -.1159**    .0405*    -.1745**    .0299
IIIB7       -.1800**    .1226**    .1516**   -.2493**    .0988**    .3312**   -.1159**   1.0000      .3045**    .4128**    .0957**
IIIB8       -.0643**    .1766**    .0538**   -.0775**    .3598**    .2759**    .0405*     .3045**   1.0000      .1984**    .1698**
IIIB9       -.1547**   -.0123      .0401*    -.4846**   -.0528**    .3096**   -.1745**    .4128**    .1984**   1.0000      .1272**
IIIB10      -.1996**    .0636**   -.0282     -.0382*     .2452**    .2763**    .0299      .0957**    .1698**    .1272**   1.0000
IIIB11      -.0991**    .3831**    .1646**   -.0110      .5362**    .2714**    .0036      .2143**    .3522**    .0618**    .3147**
IIIB12      -.1075**    .2737**    .0997**   -.0464**    .3039**    .1434**   -.0704**    .1630**    .1746**    .0878**    .1749**
IIIB13      -.0987**    .0918**    .1362**   -.1004**    .0680**    .1520**    .0108      .1517**    .1469**    .2192**    .0687**
IIIB14      -.0171      .0277      .0626**    .0717**    .0231      .0574**    .1686**    .0343*     .1387**    .0247      .0483**
IIIB15      -.0877**    .0391*     .0921**   -.0755**   -.0228      .2062**    .0123      .1321**    .0366*     .1515**    .1166**
IIIB16      -.1062**    .0679**    .0141     -.1431**    .0451**    .1489**   -.0509**    .1622**    .1125**    .2427**    .1459**
IIIB17      -.0045     -.0028      .1245**    .0823**   -.0169     -.0317*     .0355*     .0306      .0110     -.0499**   -.0048
IIIC1       -.0609**   -.0287     -.0084     -.0105      .0145      .0693**    .0763**    .0443**    .0271      .0161      .0853**
IIIC2        .0300     -.0119     -.0312*    -.0451**    .0184      .0150      .0369*    -.0043      .0131      .0429**   -.0198
IIIC3       -.0402*     .0039      .0494**    .0017      .0449**    .0512**    .0182      .0568**    .0559**    .0110     -.0108
IIIC4       -.0381*     .0112      .0227     -.0116      .0490**    .0352*     .0264     -.0094      .0258      .0169      .0500**
IIIC5       -.0319*     .0481**    .0407*    -.0619**    .0565**    .1114**    .0504**    .0735**    .0863**    .0689**   -.0269
IIIC6       -.0058      .0373*     .0274     -.0824**    .0538**    .0790**    .0666**    .0453**    .0689**    .0843**    .0199
IIIC7       -.0986**    .0529**   -.0341*    -.1388**    .0179      .0614**   -.0140      .0870**    .0636**    .1521**    .0968**
IIIC8       -.0751**    .0231      .0915**   -.0752**   -.0407*     .0687**    .0144      .0533**    .0586**    .1087**    .0362*
IIIC9       -.0482**    .0500**    .0778**   -.0413**   -.0128      .1160**   -.0105      .0774**    .0179      .0777**    .0435**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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- - Correlation Coefficients - -

	IIIB11	IIIB12	IIIB13	IIIB14	IIIB15	IIIB16	IIIB17	IIIC1	IIIC2	IIIC3	IIIC4
SEXIND	.0029	-.0117	.0013	-.0611**	-.0217	.0186	.0460**	.0090	-.1076**	.0232	.0445**
RACEIND	-.0835**	-.0416**	.0227	-.0995**	.0132	.0709**	-.0133	.0768**	-.0241	.3851**	.1149**
CHANGIND	.0660**	.0166	-.0167	.0537**	.0525**	.0580**	-.0986**	-.0073	-.0249	.0175	.0025
A1	.0872**	.0915**	.1065**	.0260	.1071**	.2202**	-.0200	-.0269	-.0307	.0283	.0192
A2	.0309	-.0056	.0142	-.0199	-.0247	-.0037	.0861**	.0626**	.0638**	-.0653**	-.0143
A3	.0664**	.0799**	.0592**	-.0163	.0217	.0868**	-.0247	.0082	-.0580**	.0431**	.0576**
A4	.0595**	-.0669**	-.0358*	.0958**	-.0092	-.0391*	.1207**	-.0232	.0571**	-.0168	-.0056
A5	-.0601**	-.1084**	-.1333**	-.0601**	-.1420**	-.2945**	.0626**	-.0453**	.0575**	-.0126	-.0465**
A6	-.0390*	-.0429**	.0212	.0787**	.0106	-.0734**	.0806**	-.0377*	.0202	-.0029	.0363*
A7	.0650**	.0993**	.0518**	-.0278	.1155**	.1148**	-.0247	.0134	-.0699**	-.0046	-.0167
A8	-.2752**	-.2669**	-.0549**	.0371*	-.0553**	-.0519**	.0137	-.0037	.0152	-.0041	-.0228
A9	-.0195	-.0385*	-.0806**	-.0023	-.0119	-.1692**	.0620**	.0218	.0338*	.0053	.0041
A10	.0748**	.0021	.0460**	.0498**	.0308	-.0498**	.0934**	-.0227	.0426**	.0012	.0178
A11	.1032**	.0934**	.0712**	.0334*	.0489**	.1370**	.0565**	.0104	-.0131	.0787**	.1128**
A12	-.0304	-.0464**	-.0508**	.0046	-.0122	-.1422**	.0946**	.0107	.0470**	-.0361*	-.0156
A13	.0612**	.1129**	.1760**	.0697**	.1166**	.6491**	.0202	-.0139	-.0660**	.0425**	.0119
A14	-.0730**	-.0829**	-.0248	.0497**	.0981**	-.1063**	.0678**	-.0014	-.0173	.0770**	.0477**
A15	-.0568**	-.0674**	-.0209	-.0083	.0079	-.0839**	.0753**	.0147	.0590**	-.0733**	-.0590**
A16	.1341**	.1279**	.1413**	.0369*	.1515**	.2260**	.0114	.0329*	-.0696**	.0715**	.0122
A17	-.0126	-.1202**	-.0870**	-.0324*	-.0608**	-.2854**	-.0170	.0337*	.0586**	-.0342*	.0141
A18	.0575**	.1143**	.1090**	.0066	.0828**	.2041**	-.0613**	.0469**	-.0907**	.0435**	.0420**
A19	.0452**	-.0315*	-.0087	.0970**	.0084	-.0613**	.0384*	-.0033	.0254	-.0035	.0215
A20	-.0424**	-.0191	-.0154	.0795**	-.0156	-.0192	.0853**	-.0344*	.0443**	-.0250	-.0480**
A21	.0556**	.1075**	.1577**	.0653**	.1229**	.5865**	.0012	-.0151	-.0582**	.0518**	.0304
A22	-.1429**	-.1482**	-.0831**	.0215	-.1233**	-.1557**	-.0207	-.0295	.0114	.0137	-.0353*
A23	.0842**	.1100**	.0756**	.0156	.0485**	.1274**	-.0206	-.0204	.0104	.0742**	.0279
A24	-.0177	-.0901**	-.0599**	-.0195	-.0466**	-.2245**	.0669**	.0671**	.0595**	-.0695**	-.0574**
A25	-.0160	-.0703**	-.1101**	.0444**	-.0351*	-.1267**	.0619**	-.0120	.0377*	-.0489**	-.0753**
A26	-.0292	-.0173	-.0058	.0076	-.0344*	-.0757**	.0453**	-.0217	-.0007	-.0055	-.0199
A27	.0520**	.0537**	.0435**	.0148	.0068	.0816**	-.0043	-.0121	-.0304	.0318*	.0425**
A28	-.0099	.0169	.0607**	.0081	.0277	.0845**	-.0202	-.0153	-.0380*	.0721**	.0418**
B1	.0796**	.0527**	.1121**	.0141	.0575**	.1614**	.0509**	.0645**	-.0249	.0539**	.0616**
B2	.0872**	.1229**	.1021**	.0222	.0379*	.2816**	.0305	.0084	-.0355*	.0531**	.0600**
B3	.0331*	.0624**	.0819**	-.0002	.0544**	.0627**	.0563**	.0516**	-.0070	.0146	.0966**
B4	.0064	.0424**	.0736**	-.0235	.0460**	.1135**	.0158	.0260	-.0523**	.0522**	.0759**
B5	.0873**	.0662**	.0387*	-.0166	.0210	.0380*	.0376*	.0365*	.0060	.0416**	.0804**
B6	.0708**	.0839**	.0517**	-.0011	.0145	.1144**	-.0948**	-.0089	-.0388*	.0530**	.1133**
B7	.0858**	.0578**	.1137**	-.0022	.0816**	.1967**	-.0587**	.0091	-.0573**	.0666**	.0698**
B8	.0360*	.0839**	.0667**	-.0242	.0225	.2678**	-.0714**	-.0229	-.0670**	.0499**	.0303
B9	.0775**	.0387*	.0941**	-.0277	.0173	.1211**	.1021**	.0961**	-.0169	.0173	.0873**
B10	.0088	.0717**	.0687**	-.0313*	.0384*	.1503**	.0312*	.0141	-.0233	.0471**	.0957**
B11	.0132	.0541**	.0729**	-.0651**	.0729**	.2115**	.0252	.0352*	-.0110	-.0100	.0653**
B12	.0724**	.0576**	.0573**	-.0220	.0079	.0579**	-.0204	.0559**	.0046	.0607**	.0748**
B13	.0532**	.0664**	.1204**	-.0111	.1386**	.1808**	.0639**	.0110	-.0247	-.0333*	.0415**
B14	.0653**	.1220**	.0514**	.0177	.0522**	.2237**	-.0345*	-.0150	-.0668**	.0492**	.0418**

* - Signif. LE .05   ** - Signif. LE .01   (2-tailed)   " . " printed if a coefficient cannot be computed

CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH
SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

- - Correlation Coefficients - -

	IIIB11	IIIB12	IIIB13	IIIB14	IIIB15	IIIB16	IIIB17	IIIC1	IIIC2	IIIC3	IIIC4
B15	.0593**	.0820**	.0687**	-.0383*	.0368*	.2642**	-.0436**	-.0269	-.0423**	.0618**	.0448**
C1	.0576**	-.0137	-.0066	-.0722**	-.1011**	.0650**	-.0097	.0424**	-.0083	-.0059	.0549**
C2	.1149**	.0948**	.1143**	.0027	.1752**	.1665**	.0494**	.0773**	-.0220	-.0429**	.0118
C3	.1433**	.1084**	.1628**	.1166**	.0733**	.1680**	.0330*	.0592**	-.0051	.0313*	.0562**
C4	.0061	.0663**	.0658**	.0035	-.0020	.0771**	.0604**	.0411**	.0516**	-.0115	.0179
C5	.0064	.0396*	.0405*	.0360*	.0085	.0695**	.0719**	.0944**	.0435**	.0216	.0647**
C6	.0659**	.0443**	.0096	-.0824**	-.0107	.1241**	-.0264	.0314*	-.0415**	.0105	.0601**
C7	.1087**	.0400*	.0943**	-.0432**	.0218	.1741**	.0652**	.0781**	-.0313*	.0088	.0445**
C8	.1085**	.0715**	.0881**	.0657**	.0394*	.1701**	.0220	.0792**	.0020	-.0050	.0121
C9	.1461**	.0670**	.0796**	.0408*	.0440**	.1087**	.0476**	.0869**	.0270	-.0174	.0145
C10	.0913**	.0297	.0474**	-.1113**	-.0056	.1773**	.0614**	.0962**	-.0004	.0100	.0630**
C11	.0531**	.0571**	.0742**	.1187**	.0387*	.1080**	.0290	.0344*	-.0005	-.0100	.0148
C12	.0773**	.1455**	.1563**	.0435**	.1085**	.3579**	.0539**	.0060	-.0546**	.0431**	.0451**
C13	.1088**	.1212**	.1285**	.0649**	.0603**	.1824**	.0832**	.0129	.0022	.0512**	.0458**
IIA1	-.3081**	-.1439**	-.0168	.0351*	.0180	-.0354*	-.0270	-.0521**	-.0050	.0144	.0248
IIA2	-.0996**	.0147	.0203	-.0922**	.0493**	.0402*	-.0424**	-.0060	.0334*	-.0025	-.0315*
IIB1	.0893**	.0187	-.1072**	-.0096	.0099	-.0857**	.0162	-.0270	.0265	.0243	-.0134
IIB2	-.0099	-.0315*	.1143**	.0487**	.0478**	-.0345*	.0527**	-.0159	-.0036	.0742**	.0454**
IIB3	.0455**	-.0172	-.0514**	-.0555**	-.0994**	.0536**	-.0381*	.0192	-.0328*	.0002	.0102
IIB4	.0240	-.0383*	-.0012	.0230	.0124	.0958**	.0370*	-.0340*	.0062	-.0036	-.0179
IIB5	.1624**	.0473**	.0186	.0259	-.0016	.0300	.0250	.0215	-.0016	-.0094	-.0157
IIC1	-.1720**	-.0582**	-.0633**	-.0113	-.0693**	-.1624**	-.0095	-.0482**	.0168	.0449**	-.0358*
IIC2	-.3899**	-.1399**	-.0346*	-.0760**	-.0453**	-.0624**	-.0516**	-.0612**	-.0038	.0067	.0058
IIC3	-.0508**	-.0633**	-.0642**	-.0360*	-.0732**	-.0205	-.0266	.0485**	-.0108	-.0260	-.0598**
IIC4	-.0406*	-.0536**	-.0125	-.0536**	.0219	.0179	-.0600**	.0312*	.0218	.0100	-.0048
IIC5	-.0203	-.0772**	-.0346*	-.0601**	-.0108	-.0141	-.0637**	.0100	.0474**	.0258	.0292
IIC6	-.1590**	-.0425**	-.0095	-.0965**	.0325*	-.0173	-.0787**	.0128	-.0016	-.0050	-.0120
IIC7	-.1354**	-.0366*	-.0313*	-.0859**	.0117	-.0586**	.0084	.0211	.0253	-.0420**	-.0233
IIC8	-.0450**	-.0801**	-.0550**	-.0289	-.0627**	-.0280	-.0399*	-.0093	.0032	-.0428**	-.0543**
IIC9	-.0426**	-.1023**	-.0805**	-.0496**	-.0388*	-.0495**	-.0470**	.0250	.0539**	-.0156	-.0190
IIC10	.1446**	.0423*	.0001	-.0817**	.0519**	.0488**	-.0757**	.0873**	.0094	-.0075	-.0245
IIC11	.1316**	.0648**	.0167	.0046	.0354*	.0673**	.0262	.0392*	.0355*	-.0476**	-.0831**
IIC12	.0575**	-.0002	-.0046	.0205	.0080	.0474**	.0339*	.0267	.0312	-.0329*	-.0127
IID1	.1231**	-.0256	-.1866**	-.0319*	-.1313**	-.1567**	-.0387*	.0483**	.0416**	.0087	.0067
IID2	.0182	-.0479**	-.1689**	-.0383*	-.1412**	-.1574**	-.0224	-.0295	-.0195	.0147	-.0212
IID3	-.0284	-.0572**	-.0797**	-.0351*	-.0195	-.1314**	.0091	.0144	-.0002	.0052	.0066
IID4	-.0511**	-.0554**	.0081	-.0249	-.0818**	-.0388*	.0697**	-.0332*	.0110	.0379*	.0421**
IID5	-.0693**	-.0880**	-.0984**	-.0291	-.0778**	-.1036**	.0190	-.0442**	.0146	.0158	-.0076
IID6	-.0652**	.0243	-.0951**	-.0559**	-.0807**	-.0864**	-.0220	-.0461**	.0185	-.0261	.0251
IID7	.0405*	.0028	-.1201**	.0135	-.0820**	.0053	-.0760**	.0074	.0222	-.0620**	-.0170
IID8	.0333*	-.0155	-.1626**	-.0341*	-.1232**	-.0835**	-.0519**	-.0247	.0112	-.0358*	.0135
IID9	-.0810**	-.0313*	-.0521**	.0202	.0701**	-.0947**	.0456**	-.0390*	-.0134	-.0313*	-.0073
IID10	-.1594**	-.0649**	-.0125	-.0042	-.0134	.0065	-.0445**	-.0784**	.0532**	-.0030	.0019
IID11	.0209	.0401*	-.0235	-.0560**	-.0147	-.0529**	.0124	-.0054	-.0051	-.0135	.0653**
IID12	-.0920**	-.0182	-.1133**	.0125	-.0601**	-.1153**	-.0520**	-.0580**	-.0389*	-.0250	-.0147

* - Signif. LE .05   ** - Signif. LE .01   (2-tailed)   " . " printed if a coefficient cannot be computed

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                          - -  Correlation Coefficients  - -

           IIIB11     IIIB12     IIIB13     IIIB14     IIIB15     IIIB16     IIIB17     IIIC1      IIIC2      IIIC3      IIIC4

IID13     -.0853**   -.0946**   -.0805**   -.0732**    .0075    -.0531**   -.1276**   -.0350*    -.0247      .0145      .0689**
IID14     -.0603**   -.0647**   -.2122**   -.0789**   -.1391**   -.1507**   -.0885**   -.0261     -.0113     -.0607**    .0095
IID15     -.0273     -.0502**   -.0542**   -.0064     -.0248     -.1133**   -.0146      .0152      .0109     -.0326*     .0105
IID16     -.0127     -.0232     -.0316*     .0218     -.0152      .0059     -.0634**   -.0095     -.0329*    -.0493**    .0101
IID17     -.1012**   -.0534**   -.0714**    .0103     -.0439**   -.0997**   -.0006     -.0398*     .0356*    -.0013     -.0100
IID18     -.1362**   -.0802**   -.0894**    .0275     -.0685**   -.0856**   -.0524**   -.0581**   -.0128     -.0443**   -.0084
IID19     -.1997**   -.1137**   -.1164**   -.0205     -.0607**   -.0730**   -.1389**   -.0522**   -.0099     -.0342*    -.0305
IID20      .0330*    -.0099     -.0937**   -.0379*    -.0287     -.1187**   -.0158     -.0430**   -.0147      .0571**   -.0087
IID21      .0087     -.0458**   -.0416**   -.0485**   -.0464**   -.1266**    .0410**    .0047     -.0083     -.0250     -.0285
IID22     -.0991**   -.1075**   -.0987**   -.0171     -.0877**   -.1062**   -.0045     -.0609**    .0300     -.0402*    -.0381*
IIIB1      .3831**    .2737**    .0918**    .0277      .0391*     .0679**   -.0028     -.0287     -.0119      .0039      .0112
IIIB2      .1646**    .0997**    .1362**    .0626**    .0921**    .0141      .1245**   -.0084     -.0312*     .0494**    .0227
IIIB3     -.0110     -.0464**   -.1004**    .0717**   -.0755**   -.1431**    .0823**   -.0185     -.0451**    .0017     -.0116
IIIB4      .5362**    .3039**    .0680**    .0231     -.0228      .0451**   -.0169      .0145      .0104      .0449**    .0490**
IIIB5      .2714**    .1434**    .1520**    .0574**    .2062**    .1489**   -.0317*     .0693**    .0150      .0512**    .0352*
IIIB6      .0036     -.0704**    .0108      .1686**    .0123     -.0509**    .0355*     .0763**    .0369*     .0182      .0264
IIIB7      .2143**    .1630**    .1517**    .0343*     .1321**    .1622**    .0306      .0443**   -.0043      .0568**   -.0094
IIIB8      .3522**    .1746**    .1469**    .1387**    .0366*     .1125**    .0110      .0271      .0131      .0559**    .0258
IIIB9      .0618**    .0878**    .2192**    .0247      .1515**    .2427**   -.0499**    .0161      .0429**    .0110      .0169
IIIB10     .3147**    .1749**    .0687**    .0483**    .1166**    .1459**   -.0048      .0853**   -.0198     -.0108      .0500**
IIIB11    1.0000      .3844**    .1234**    .0729**    .0439**    .1077**    .0040     -.0070      .0362*     .0119      .0298
IIIB12     .3844**   1.0000      .1901**    .0428**    .0852**    .1376**   -.0151     -.0079      .0014      .0181     -.0166
IIIB13     .1234**    .1901**   1.0000      .2972**    .4569**    .3465**    .0568**    .1066**    .0448**    .0612**    .0360*
IIIB14     .0729**    .0428**    .2972**   1.0000      .3088**    .1778**    .0282     -.0147      .0041      .0524**   -.0090
IIIB15     .0439**    .0852**    .4569**    .3088**   1.0000      .2737**    .0480**    .0688**    .0259      .0529**    .0284
IIIB16     .1077**    .1376**    .3465**    .1778**    .2737**   1.0000      .0498**    .0324*    -.0222      .0586**    .0407*
IIIB17     .0040     -.0151      .0568**    .0282      .0480**    .0498**   1.0000     -.0393*    -.0555**    .0483**    .0591**
IIIC1     -.0070     -.0079      .1066**   -.0147      .0688**    .0324*    -.0393*    1.0000      .1608**    .0477**    .1969**
IIIC2      .0362*     .0014      .0448**    .0041      .0259     -.0222     -.0555**    .1608**   1.0000     -.0310     -.0252
IIIC3      .0119      .0181      .0612**    .0524**    .0529**    .0586**    .0483**    .0477**   -.0310     1.0000      .4691**
IIIC4      .0298     -.0166      .0360*    -.0090      .0284      .0407*     .0591**    .1969**   -.0252      .4691**   1.0000
IIIC5      .0415**    .0579**    .0832**    .0254      .0539**    .0732**    .0051      .0273     -.0535**    .5981**    .3085**
IIIC6      .0404*     .0201      .1059**    .0085      .0744**    .0712**   -.0110      .1980**   -.0170      .3087**    .6796**
IIIC7      .0697**    .0719**    .2140**    .0931**    .1293**    .6293**    .0326*    -.0193     -.0021      .0385*     .0251
IIIC8      .0026      .0281      .6616**    .2482**    .3497**    .2470**    .0529**    .1034**    .0284      .0639**    .0563**
IIIC9      .0072      .0582**    .3380**    .2403**    .7438**    .1853**    .0487**    .0657**    .0041      .0460**    .0063

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH                                      Page  42
12:20:38    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                        - -  Correlation Coefficients  - -

              IIIC5        IIIC6        IIIC7        IIIC8        IIIC9

SEXIND         .0152        .0631**      .0063        .0009       -.0188
RACEIND        .0684**      .1177**      .0652**      .0296        .0204
CHANGIND       .0354*       .0392*       .0330*      -.0140        .0520**
A1             .0383*       .0345*       .1427**      .0761**      .0992**
A2            -.0386*      -.0021       -.0111        .0158       -.0028
A3             .0511**      .0800**      .0179        .0494**      .0057
A4            -.0460**     -.0107       -.0378*      -.0141       -.0249
A5            -.0730**     -.0727**     -.2063**     -.0923**     -.1002**
A6             .0204        .0422**     -.0698**      .0171        .0111
A7             .0090        .0177        .0787**      .0380*       .0508**
A8            -.0527**     -.0379*      -.0372*      -.0100       -.0693**
A9            -.0435**     -.0535**     -.0967**     -.0427**     -.0185
A10           -.0405*      -.0342*       .0130        .0470**      .0196
A11            .0647**      .1129**      .0431**      .0389*       .0395*
A12           -.0762**     -.0616**     -.1077**     -.0200        .0030
A13            .0344*       .0356*       .5174**      .1299**      .0808**
A14            .0364*       .0528**     -.0551**     -.0165        .0631**
A15           -.0539**     -.0758**     -.0445**     -.0183       -.0334*
A16            .0425**      .0427**      .1681**      .0660**      .1027**
A17           -.0388*       .0032       -.2319**     -.0654**     -.0591**
A18            .0926**      .0680**      .1341**      .0369*       .0697**
A19           -.0168        .0012       -.0062        .0217        .0025
A20           -.0708**     -.0569**     -.0010        .0384*      -.0050
A21            .0382*       .0383*       .4434**      .0996**      .0897**
A22           -.0171       -.0463**     -.0951**     -.0354*      -.0758**
A23            .0594**      .0430**      .0750**      .0390*       .0598**
A24           -.0744**     -.0738**     -.1285**      .0333*      -.0099
A25           -.0949**     -.1047**     -.0687**     -.0483**     -.0190
A26           -.0016       -.0474**     -.0923**     -.0266       -.0566**
A27            .0322*       .0510**      .0373*       .0198       -.0011
A28            .0831**      .0608**     -.0021        .0437**      .0290
B1             .0468**      .0701**      .0957**      .0231        .0142
B2             .0517**      .0652**      .1419**      .0270        .0276
B3             .0148        .0797**      .0371*       .0404*       .0431**
B4             .0253        .0636**      .0716**      .0157        .0639**
B5             .0727**      .0797**      .0052       -.0342*      -.0047
B6             .0966**      .0831**      .0127       -.0057        .0048
B7             .0856**      .0608**      .0721**      .0475**      .0480**
B8             .0698**      .0404*       .1669**      .0084        .0304
B9             .0388*       .0768**      .0162        .0386*       .0152
B10            .0856**      .0908**      .0496**      .0035       -.0023
B11            .0086        .0372*       .1518**     -.0195        .0277
B12            .0136        .0448**      .0178       -.0251       -.0086
B13           -.0039        .0441**      .1246**      .0158        .0873**
B14            .0549**      .0557**      .1211**      .0033        .0379*

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)           " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATION MATRIX OF ALL QUESTIONNAIRE RESPONSES WITH                              Page  43
12:20:38    SEX AND IND. OF CHANGE OF MAJOR FOR GRE SCIENCE MAJORS

                      - -  Correlation Coefficients  - -

             IIIC5      IIIC6      IIIC7      IIIC8      IIIC9

B15          .0771**    .0611**    .1920**    .0178      .0524**
C1           .0177      .0462**    .0288     -.0402*    -.0850**
C2          -.0106      .0375*     .1047**    .0901**    .0867**
C3           .0356*     .0657**    .1408**    .1094**    .0729**
C4          -.0052     -.0141      .0582**    .0328*    -.0176
C5           .0101      .0148      .0750**    .0286     -.0375*
C6           .0574**    .0526**    .0754**   -.0059      .0036
C7           .0357*     .0633**    .1033**    .0509**   -.0031
C8           .0141      .0283      .1054**    .0381*     .0213
C9           .0000      .0262      .0876**    .0495**    .0140
C10          .0454**    .0798**    .1450**    .0023      .0035
C11         -.0116      .0179      .0971**    .0483**    .0369*
C12          .0356*     .0191      .2375**    .0886**    .0738**
C13          .0123      .0245      .1114**    .0893**    .0396*
IIA1         .0299      .0067     -.0506**    .0239      .0296
IIA2         .0126     -.0109      .0189      .0215      .0425**
IIB1         .0000     -.0046     -.0697**   -.0595**   -.0245
IIB2         .0158      .0222     -.0254      .0860**    .0438**
IIB3         .0189      .0324*    -.0058     -.0426**   -.0699**
IIB4        -.0094     -.0168      .0081      .0064      .0184
IIB5        -.0066      .0078      .0370*    -.0208      .0010
IIC1         .0277     -.0158     -.1362**   -.0480**   -.0354*
IIC2         .0130      .0254     -.0615**    .0007     -.0233
IIC3        -.0523**   -.0386*    -.0149     -.0446**   -.0656**
IIC4        -.0218     -.0310      .0255      .0056      .0100
IIC5        -.0066      .0166     -.0107     -.0045      .0228
IIC6         .0067     -.0011      .0068      .0078      .0466**
IIC7        -.0448**   -.0002     -.0615**   -.0140      .0239
IIC8        -.0260     -.0193      .0006     -.0196     -.0443**
IIC9        -.0127      .0084     -.0025     -.0310     -.0408*
IIC10        .0067      .0037      .0478**    .0064      .0606**
IIC11       -.0430**   -.0584**    .0582**    .0172      .0250
IIC12        .0312      .0117      .0354*    -.0263      .0144
IID1         .0413**    .0319*    -.0542**   -.1228**   -.0873**
IID2         .0709**    .0127     -.1363**   -.1298**   -.0667**
IID3         .0316*     .0275     -.0969**   -.0521**   -.0277
IID4        -.0142     -.0058      .0151      .0080     -.0440**
IID5         .0197      .0098     -.0507**   -.0934**   -.0899**
IID6        -.0264      .0168     -.0278     -.0697**   -.0565**
IID7        -.0047      .0274      .0119     -.0771**   -.0422**
IID8         .0103      .0276     -.0474**   -.1377**   -.0932**
IID9         .0168      .0397*    -.0508**   -.0242      .0174
IID10       -.0271     -.0020      .0060     -.0232     -.0144
IID11        .0058      .0675**   -.0163     -.0038     -.0163
IID12       -.0429**   -.0321*    -.1148**   -.0926**   -.0803**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)        " . " printed if a coefficient cannot be computed
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                        - -  Correlation Coefficients  - -

               IIIC5        IIIC6        IIIC7        IIIC8        IIIC9

IID13          .0401*       .0488**     -.0544**     -.0359*      -.0178
IID14         -.0052        .0033       -.1271**     -.1046**     -.1117**
IID15          .0279        .0440**     -.0514**     -.0179        .0197
IID16         -.0264        .0263        .0050        .0297        .0262
IID17          .0208       -.0134       -.0522**     -.0428**     -.0247
IID18         -.0159       -.0275       -.0606**     -.0603**     -.0572**
IID19         -.0290       -.0049       -.0558**     -.0421**     -.0204
IID20          .0416**      .0387*      -.0928**     -.0460**     -.0027
IID21         -.0446**      .0026       -.0848**     -.0479**     -.0163
IID22         -.0319*      -.0058       -.0986**     -.0751**     -.0482**
IIIB1          .0481**      .0373*       .0529**      .0231        .0500**
IIIB2          .0407*       .0274       -.0341*       .0915**      .0778**
IIIB3         -.0619**     -.0824**     -.1388**     -.0752**     -.0413**
IIIB4          .0565**      .0538**      .0179       -.0407*      -.0128
IIIB5          .1114**      .0790**      .0614**      .0687**      .1160**
IIIB6          .0504**      .0666**     -.0140        .0144       -.0105
IIIB7          .0735**      .0453**      .0870**      .0533**      .0774**
IIIB8          .0863**      .0689**      .0636**      .0586**      .0179
IIIB9          .0689**      .0843**      .1521**      .1087**      .0777**
IIIB10        -.0269        .0199        .0968**      .0362*       .0435**
IIIB11         .0415**      .0404*       .0697**      .0026        .0072
IIIB12         .0579**      .0201        .0719**      .0201        .0582**
IIIB13         .0832**      .1059**      .2140**      .6616**      .3380**
IIIB14         .0254        .0085        .0931**      .2482**      .2403**
IIIB15         .0539**      .0744**      .1293**      .3497**      .7438**
IIIB16         .0732**      .0712**      .6293**      .2470**      .1853**
IIIB17         .0051       -.0110        .0326*       .0529**      .0487**
IIIC1          .0273        .1980**     -.0193        .1034**      .0657**
IIIC2         -.0535**     -.0170       -.0021        .0284        .0041
IIIC3          .5981**      .3087**      .0385*       .0639**      .0460**
IIIC4          .3085**      .6796**      .0251        .0563**      .0063
IIIC5         1.0000        .5117**      .0417**      .0573**      .0605**
IIIC6          .5117**     1.0000        .0390*       .0917**      .0645**
IIIC7          .0417**      .0390*      1.0000        .2362**      .1314**
IIIC8          .0573**      .0917**      .2362**     1.0000        .3717**
IIIC9          .0605**      .0645**      .1314**      .3717**     1.0000

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)       " . " printed if a coefficient cannot be computed
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Appendix G

Correlation Matrix of GRE Scores, Background Variables, and Questionnaire Scales for Total Sample and Each Subgroup

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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                                  Page   8
14:03:11    QUESTIONS FOR TOTAL GROUP AND RACE X SEX GROUPS

                     - -  Correlation Coefficients  - -

            CHANGIND   SEXIND     RACEIND    GREV       GREQ       GREA       ETHNIC     UGPA       FATHED     MOTHED     ARTICIND

CHANGIND    1.0000      .0277     -.0004     -.0055     -.0245      .0055      .0106     -.0265      .0000      .0108      .0164
SEXIND       .0277     1.0000      .0671**   -.1543**   -.3245**   -.0685**   -.0808**   -.0200     -.0244      .0335*    -.0017
RACEIND     -.0004      .0671**   1.0000     -.2530**   -.1712**   -.2727**   -.9296**   -.1675**   -.1200**   -.0459**    .0118
GREV        -.0055     -.1543**   -.2530**   1.0000      .5420**    .6395**    .2670**    .3006**    .2409**    .2339**    .0968**
GREQ        -.0245     -.3245**   -.1712**    .5420**   1.0000      .6781**    .2210**    .4044**    .2316**    .1387**    .0421**
GREA         .0055     -.0685**   -.2727**    .6395**    .6781**   1.0000      .2873**    .3236**    .2323**    .1955**    .0161
ETHNIC       .0106     -.0808**   -.9296**    .2670**    .2210**    .2873**   1.0000      .1861**    .1456**    .0583**    .0012
UGPA        -.0265     -.0200     -.1675**    .3006**    .4044**    .3236**    .1861**   1.0000      .0443**    .0399*     .0639**
FATHED       .0000     -.0244     -.1200**    .2409**    .2316**    .2323**    .1456**    .0443**   1.0000      .5372**    .0348*
MOTHED       .0108      .0335*    -.0459**    .2339**    .1387**    .1955**    .0583**    .0399*     .5372**   1.0000      .0583**
ARTICIND     .0164     -.0017      .0118      .0968**    .0421**    .0161      .0012      .0639**    .0348*     .0583**   1.0000
HONORIND    -.0406*    -.0120     -.0228      .0905**    .1507**    .0763**    .0195      .4567**   -.0174     -.0420**    .0455**
UGPAM       -.0564**   -.1077**   -.1661**    .2779**    .3563**    .2888**    .1801**    .7754**    .0198      .0123      .0588**
UGPA2       -.0239     -.0670**   -.1916**    .2883**    .3757**    .3127**    .2117**    .8080**    .0208      .0064      .0746**
WORKHOUR     .0369*     .0862**    .0245     -.0664**   -.1498**   -.0699**   -.0299     -.0846**   -.1871**   -.1493**    .0400*
COMMHOUR     .0498**    .1095**    .0761**   -.0884**   -.0741**   -.0045     -.0859**    .0211      .0009      .0355*     .0474**
SCIAWARD    -.0310      .0048     -.0003      .1068**    .0717**    .0927**    .0047      .1353**   -.0068      .0350*     .0007
DEGOBJ      -.0578**   -.0646**    .0029      .2012**    .0901**    .1145**   -.0164      .1107**    .0371*     .0463**    .1189**
SCALE1       .0552**    .0560**    .1427**   -.1237**   -.0617**   -.0862**   -.1160**   -.1652**   -.0369*    -.0081     -.0078
SCALE2      -.2310**   -.0563**   -.1185**   -.0225     -.0668**   -.0455**    .0920**    .0348*    -.0470**   -.0905**    .0034
SCALE3      -.0383*     .0159     -.0649**    .0117     -.0636**   -.0020      .0379*     .0094      .0066      .0041      .0057
SCALE4      -.0815**    .0170     -.1230**   -.0164     -.0715**   -.0052      .0831**    .1492**   -.0630**   -.0571**    .0197
SCALE5      -.0521**    .0500**   -.1136**    .0161     -.0003      .0283      .0953**    .0338*     .0377*     .0120     -.0360*
SCALE6      -.1771**   -.1383**   -.0334*     .0417**    .0639**    .0056      .0209      .0285     -.0406*    -.0690**    .0630**
SCALE7      -.0513**    .0272     -.1021**    .0427**    .0179      .0581**    .0864**    .0097      .0456**    .0170     -.0119
SCALE8      -.0372*    -.1635**   -.0892**    .2040**    .4163**    .3223**    .1044**    .3951**    .0718**    .0162      .0261
SCALE9      -.0191      .1367**   -.0130     -.1577**   -.1104**   -.1837**    .0166      .2789**   -.0890**   -.1292**    .0322*
SCALE10      .0314*     .0035     -.0637**    .4053**    .0360*     .1449**    .0573**    .1412**    .0831**    .1096**    .0724**
SCALE11     -.0274      .0757**   -.0111     -.1345**   -.1870**   -.1650**   -.0027      .0288     -.0751**   -.0713**    .0198
SCALE12     -.0806**    .0070      .0683**   -.1266**   -.0223     -.0882**   -.0955**    .0183     -.0755**   -.0506**    .0137
SCALE13      .0021     -.0376*     .0950**   -.0577**    .0914**    .0278     -.0769**   -.0067      .0392*     .0645**   -.0717**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)            " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                                     Page    9
14:03:11    QUESTIONS FOR TOTAL GROUP AND RACE X SEX GROUPS

                          - -  Correlation Coefficients  - -

           HONORIND    UGPAM      UGPA2     WORKHOUR   COMMHOUR   SCIAWARD    DEGOBJ     SCALE1     SCALE2     SCALE3     SCALE4

CHANGIND   -.0406*    -.0564**   -.0239      .0369*     .0498**   -.0310     -.0578**    .0552**   -.2310**   -.0383*    -.0815**
SEXIND     -.0120     -.1077**   -.0670**    .0862**    .1095**    .0048     -.0646**    .0560**   -.0563**    .0159      .0170
RACEIND    -.0228     -.1661**   -.1916**    .0245      .0761**   -.0003      .0029      .1427**   -.1185**   -.0649**   -.1238**
GREV        .0905**    .2779**    .2883**   -.0664**   -.0884**    .1068**    .2012**   -.1237**   -.0225      .0117     -.0164
GREQ        .1507**    .3563**    .3757**   -.1498**   -.0741**    .0717**    .0901**   -.0617**   -.0660**   -.0636**   -.0715**
GREA        .0763**    .2888**    .3127**   -.0699**   -.0045      .0927**    .1145**   -.0862**   -.0455**   -.0020     -.0052
ETHNIC      .0195      .1801**    .2117**   -.0299     -.0859**    .0047     -.0164     -.1160**    .0920**    .0379*     .0831**
UGPA        .4567**    .7754**    .8080**   -.0846**    .0211      .1353**    .1107**   -.1652**    .0348*     .0094      .1492**
FATHED     -.0174      .0198      .0208     -.1871**    .0009     -.0068      .0371*    -.0369*    -.0470**    .0066     -.0630**
MOTHED     -.0428**    .0123      .0064     -.1493**    .0355*     .0350*     .0463**   -.0081     -.0905**    .0041     -.0571**
ARTICIND    .0455**    .0588**    .0746**    .0400*     .0474**    .0007      .1189**   -.0078      .0034      .0057      .0197
HONORIND   1.0000      .4045**    .3827**   -.0711**    .0607**    .0740**    .0719**   -.1359**    .0556**   -.0307      .1102**
UGPAM       .4045**   1.0000      .7808**   -.0477**   -.0245      .1378**    .1165**   -.2495**    .1221**    .0545**    .1803**
UGPA2       .3827**    .7808**   1.0000     -.0330*    -.0077      .1446**    .1383**   -.2134**    .0984**    .0394*     .1908**
WORKHOUR   -.0711**   -.0477**   -.0330*    1.0000      .0312*    -.0071      .0888**    .0220     -.0375*    -.0875**    .0139
COMMHOUR    .0607**   -.0245     -.0077      .0312*    1.0000     -.0149      .0467**    .0436**   -.0176     -.0324*     .0894**
SCIAWARD    .0740**    .1378**    .1446**   -.0071     -.0149     1.0000      .0769**   -.0171      .0197      .0539**    .0799**
DEGOBJ      .0719**    .1165**    .1383**    .0888**    .0467**    .0769**   1.0000     -.0755**    .1134**    .0448**    .1442**
SCALE1     -.1359**   -.2495**   -.2134**    .0220      .0436**   -.0171     -.0755**   1.0000     -.3043**   -.3233**   -.2363**
SCALE2      .0556**    .1221**    .0984**   -.0375*    -.0176      .0197      .1134**   -.3043**   1.0000      .3204**    .3687**
SCALE3     -.0307      .0545**    .0394*    -.0875**   -.0324*     .0539**    .0448**   -.3233**    .3204**   1.0000      .3781**
SCALE4      .1102**    .1803**    .1908**    .0139      .0894**    .0799**    .1442**   -.2363**    .3687**    .3781**   1.0000
SCALE5      .0229      .0645**    .0450**   -.0889**   -.0268      .0671**   -.0309*    -.2069**    .2918**    .3628**    .3536**
SCALE6      .0614**    .0652**    .0800**   -.0162      .0177      .0228      .1581**   -.2056**    .4466**    .1412**    .2752**
SCALE7     -.0319*     .0408**    .0665**   -.0624**    .0209      .0325*     .0384*    -.1824**    .3340**    .4907**    .4443**
SCALE8      .2338**    .4112**    .4160**   -.0730**   -.0100      .0876**    .0895**   -.1823**    .1901**    .0258      .1466**
SCALE9      .1787**    .2221**    .2634**   -.0245      .0265      .0578**   -.0250     -.0037      .1498**    .0260      .1526**
SCALE10     .0759**    .1197**    .1303**    .0530**    .0118      .0415**    .0741**   -.0683**    .0232     -.0031      .0718**
SCALE11     .0338*     .0751**    .0923**    .0684**    .0991**    .0692**    .0346*    -.0770**    .2941**    .1901**    .4677**
SCALE12     .1144**    .0097      .0202     -.0711**    .0929**    .0435**   -.0426**   -.0146      .0980**    .0551**    .0949**
SCALE13    -.0368*    -.0390*    -.0528**   -.0197     -.0467**   -.0286     -.1622**    .1983**   -.4044**   -.1537**   -.2468**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                               Page 10
14:03:11    QUESTIONS FOR TOTAL GROUP AND RACE X SEX GROUPS

                        - -  Correlation Coefficients  - -

             SCALE5     SCALE6     SCALE7     SCALE8     SCALE9     SCALE10    SCALE11    SCALE12    SCALE13

CHANGIND    -.0521**   -.1771**   -.0513**   -.0372*    -.0191       .0314*    -.0274     -.0806**     .0021
SEXIND        .0500**  -.1383**     .0272    -.1635**     .1367**    .0035       .0757**    .0070     -.0376*
RACEIND     -.1136**   -.0334*    -.1021**   -.0892**   -.0130     -.0637**   -.0111       .0683**     .0950**
GREV          .0161      .0417**    .0427**    .2040**  -.1577**     .4053**  -.1345**   -.1266**   -.0577**
GREQ        -.0003       .0639**    .0179      .4163**  -.1104**     .0360*   -.1870**   -.0223       .0914**
GREA          .0283      .0056      .0581**    .3223**  -.1637**     .1449**  -.1650**   -.0882**     .0278
ETHNIC        .0953**    .0209      .0864**    .1044**    .0166      .0573**  -.0027     -.0955**   -.0769**
UGPA          .0338*     .0285      .0097      .3951**    .2789**    .1412**    .0288      .0183     -.0067
FATHED        .0377*   -.0406*      .0456**    .0718**  -.0890**     .0831**  -.0751**   -.0755**     .0392*
MOTHED        .0120    -.0690**     .0170      .0162    -.1292**     .1096**  -.0713**   -.0506**     .0645**
ARTICIND    -.0360*      .0630**  -.0119       .0261      .0322*     .0724**    .0198      .0137     -.0717**
HONORIND      .0229      .0614**  -.0319*      .2338**    .1787**    .0759**    .0338*     .1144**   -.0368*
UGPAM         .0645**    .0652**    .0408**    .4112**    .2221**    .1197**    .0751**    .0097     -.0390*
UGPA2         .0450**    .0800**    .0665**    .4160**    .2634**    .1303**    .0923**    .0202     -.0528**
WORKHOUR    -.0889**   -.0162     -.0624**   -.0730**   -.0245       .0530**    .0604**  -.0711**   -.0197
COMMHOUR    -.0268       .0177      .0209    -.0100       .0265      .0118      .0991**    .0929**   -.0467**
SCIAWARD      .0671**    .0228      .0325*     .0876**    .0578**    .0415**    .0692**    .0435**   -.0286
DEGOBJ      -.0309*      .1581**    .0384*     .0895**  -.0250       .0741**    .0346*   -.0426**   -.1622**
SCALE1      -.2069**   -.2056**   -.1824**   -.1823**   -.0037     -.0683**   -.0770**   -.0146       .1983**
SCALE2        .2918**    .4466**    .3340**    .1901**    .1498**    .0232      .2941**    .0980**   -.4044**
SCALE3        .3628**    .1412**    .4907**    .0258      .0260     -.0031      .1981**    .0551**   -.1537**
SCALE4        .3536**    .2752**    .4443**    .1466**    .1526**    .0718**    .4677**    .0949**   -.2468**
SCALE5      1.0000       .2026**    .3985**    .0565**    .0504**    .0235      .3221**    .1038**   -.1868**
SCALE6        .2026**  1.0000       .1877**    .2392**    .0922**    .0687**    .2373**    .1634**   -.3876**
SCALE7        .3985**    .1877**  1.0000       .1393**    .1488**    .0908**    .3491**    .1358**   -.2567**
SCALE8        .0565**    .2392**    .1393**  1.0000       .2659**    .2318**    .1629**    .1154**   -.1515**
SCALE9        .0504**    .0922**    .1488**    .2659**  1.0000       .2362**    .3163**    .1197**   -.1776**
SCALE10       .0235      .0687**    .0908**    .2318**    .2362**  1.0000       .1657**    .0275     -.1128**
SCALE11       .3221**    .2373**    .3491**    .1629**    .3163**    .1657**  1.0000       .1181**   -.2408**
SCALE12       .1038**    .1634**    .1358**    .1154**    .1197**    .0275      .1181**  1.0000     -.1585**
SCALE13     -.1868**   -.3876**   -.2567**   -.1515**   -.1776**   -.1128**   -.2408**   -.1585**   1.0000

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)         " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                                    Page  13
14:03:17    CORRELATIONS FOR WHITE MALE RESPONDENTS

                                    - -  Correlation Coefficients  - -

             CHANGIND    SEXIND      RACEIND     GREV        GREQ        GREA        ETHNIC      UGPA        FATHED      MOTHED      ARTICIND

CHANGIND     1.0000       .           .          -.0090      -.0152       .0116       .          -.0210       .0009       .0317       .0285
SEXIND        .          1.0000       .           .           .           .           .           .           .           .           .
RACEIND       .           .          1.0000       .           .           .           .           .           .           .           .
GREV         -.0090       .           .          1.0000       .5036**     .6154**     .           .3014**     .2415**     .2646**     .1332**
GREQ         -.0152       .           .           .5036**    1.0000       .6697**     .           .4316**     .2061**     .1913**     .0364
GREA          .0116       .           .           .6154**     .6697**    1.0000       .           .2919**     .2120**     .2316**     .0177
ETHNIC        .           .           .           .           .           .          1.0000       .           .           .           .
UGPA         -.0210       .           .           .3014**     .4316**     .2919**     .          1.0000       .0014       .0404       .0530*
FATHED        .0009       .           .           .2415**     .2061**     .2120**     .           .0014      1.0000       .5073**    -.0199
MOTHED        .0317       .           .           .2646**     .1913**     .2316**     .           .0404       .5073**    1.0000       .0304
ARTICIND      .0285       .           .           .1332**     .0364       .0177       .           .0530*     -.0199       .0304      1.0000
HONORIND     -.0437*      .           .           .1105**     .1949**     .0798**     .           .4508**    -.0079      -.0500*      .0354
UGPAM        -.0557**     .           .           .2695**     .3525**     .2510**     .           .7629**    -.0111       .0222       .0444*
UGPA2        -.0148       .           .           .2670**     .3663**     .2568**     .           .7735**    -.0334      -.0037       .0749**
WORKHOUR      .0056       .           .          -.0718**    -.1462**    -.0844**     .          -.0660**    -.2360**    -.2151**     .0563**
COMMHOUR      .0542*      .           .          -.0544*      .0149       .0530*      .           .0666**    -.0198       .0478*      .0618**
SCIAWARD     -.0316       .           .           .0633**     .0699**     .0778**     .           .1202**     .0072       .0682**    -.0359
DEGOBJ       -.0511*      .           .           .2111**     .1029**     .1457**     .           .1072**     .0962**     .0229       .1191**
SCALE1        .0488*      .           .          -.1215**    -.0469*     -.0545*      .          -.1257**    -.0320      -.0033      -.0252
SCALE2       -.2444**     .           .          -.0520*     -.0974**    -.0610**     .          -.0212      -.0611**    -.1103**    -.0185
SCALE3       -.0191       .           .          -.0081      -.0780**    -.0182       .          -.0652**     .0506*      .0182       .0423*
SCALE4       -.0769**     .           .          -.0189      -.0641**     .0043       .           .0972**    -.0824**    -.0844**     .0669**
SCALE5       -.0392       .           .           .0100       .0376       .0281       .          -.0066       .0516*      .0062      -.0380
SCALE6       -.1589**     .           .           .0526*      .1087**     .0430*      .           .0100      -.0539*     -.0684**     .0628**
SCALE7       -.0415       .           .           .0277       .0291       .0751**     .          -.0301       .0806**     .0213      -.0170
SCALE8       -.0239       .           .           .1527**     .4199**     .3331**     .           .3831**     .0607**     .0171      -.0190
SCALE9       -.0155       .           .          -.1442**    -.0920**    -.2085**     .           .2794**    -.1377**    -.2202**     .0111
SCALE10       .0235       .           .           .4617**     .0610**     .1685**     .           .1754**     .1047**     .1004**     .0978**
SCALE11      -.0211       .           .          -.1337**    -.2241**    -.1690**     .          -.0589**    -.1123**    -.1252**    -.0081
SCALE12      -.0535*      .           .          -.1225**    -.0026      -.0644**     .           .0346      -.0745**    -.0822**     .0189
SCALE13       .0198       .           .          -.0628**     .0413       .0336       .           .0197       .0655**     .1067**    -.0747**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)           " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                                          Page  14
14:03:17    CORRELATIONS FOR WHITE MALE RESPONDENTS

                               - -  Correlation Coefficients  - -

              HONORIND    UGPAM       UGPA2       WORKHOUR    COMMHOUR    SCIAWARD    DEGOBJ      SCALE1      SCALE2      SCALE3      SCALE4

CHANGIND      -.0437*     -.0557**    -.0148       .0056       .0542*     -.0316      -.0511*      .0488*     -.2444**    -.0191      -.0769**
SEXIND          .           .           .           .           .           .           .           .           .           .           .
RACEIND         .           .           .           .           .           .           .           .           .           .           .
GREV           .1105**     .2695**     .2670**    -.0718**    -.0544*      .0633**     .2111**    -.1215**    -.0520*     -.0081      -.0189
GREQ           .1949**     .3525**     .3663**    -.1462**     .0149       .0699**     .1029**    -.0469*     -.0974**    -.0780**    -.0641**
GREA           .0798**     .2510**     .2568**    -.0844**     .0530*      .0778**     .1457**    -.0545*     -.0610**    -.0182       .0043
ETHNIC          .           .           .           .           .           .           .           .           .           .           .
UGPA           .4508**     .7629**     .7735**    -.0660**     .0666**     .1202**     .1072**    -.1257**    -.0212      -.0652**     .0972**
FATHED        -.0079      -.0111      -.0334      -.2360**    -.0198       .0072       .0962**    -.0320      -.0611**     .0506*     -.0824**
MOTHED        -.0500*      .0222      -.0037      -.2151**     .0478*      .0682**     .0229      -.0033      -.1103**     .0182      -.0844**
ARTICIND       .0354       .0444*      .0749**     .0563**     .0618**    -.0359       .1191**    -.0252      -.0185       .0423*      .0669**
HONORIND      1.0000       .4022**     .3637**    -.0727**     .0729**     .0469*      .0384      -.1540**     .0614**    -.0634**     .0728**
UGPAM          .4022**    1.0000       .7563**    -.0282       .0128       .1093**     .0982**    -.2382**     .0682**    -.0024       .0999**
UGPA2          .3637**     .7563**    1.0000       .0013       .0258       .1325**     .1488**    -.1977**     .0578**    -.0300       .1442**
WORKHOUR      -.0727**    -.0282       .0013      1.0000       .0008       .0164       .0990**    -.0109      -.0153      -.1103**     .0452*
COMMHOUR       .0729**     .0128       .0258       .0008      1.0000       .0082       .0806**     .0281       .0312      -.0066       .1762**
SCIAWARD       .0469*      .1093**     .1325**     .0164       .0082      1.0000       .0221       .0387      -.0403       .0468*      .0467*
DEGOBJ         .0384       .0982**     .1488**     .0990**     .0806**     .0221      1.0000      -.0846**     .1527**     .0726**     .1896**
SCALE1        -.1540**    -.2382**    -.1977**    -.0109       .0281       .0387      -.0846**    1.0000      -.2801**    -.2935**    -.1588**
SCALE2         .0614**     .0682**     .0578**    -.0153       .0312      -.0403       .1527**    -.2801**    1.0000       .3486**     .3535**
SCALE3        -.0634**    -.0024      -.0300      -.1103**    -.0066       .0468*      .0726**    -.2935**     .3486**    1.0000       .3633**
SCALE4         .0728**     .0999**     .1442**     .0452*      .1762**     .0467*      .1896**    -.1588**     .3535**     .3633**    1.0000
SCALE5        -.0160       .0292       .0048      -.1056**    -.0089       .0590**    -.0212      -.2049**     .2846**     .3645**     .2858**
SCALE6         .0682**     .0010       .0523*     -.0227       .0618**    -.0341       .1127**    -.1500**     .4281**     .0915**     .2250**
SCALE7        -.0685**     .0133       .0512*     -.0921**     .0412      -.0263       .0729**    -.2439**     .3405**     .5280**     .4775**
SCALE8         .2616**     .4072**     .4239**    -.0767**     .0297       .0615**     .0704**    -.1818**     .1605**    -.0015       .1145**
SCALE9         .1972**     .2108**     .2486**     .0003      -.0160       .0413      -.0437*     -.0111       .1341**     .0192       .1245**
SCALE10        .1083**     .1427**     .1599**     .0395      -.0128      -.0020       .0611**    -.1390**     .0086       .0021       .0503*
SCALE11        .0075      -.0039       .0196       .1220**     .0899**     .0556*      .0219      -.1071**     .2924**     .2226**     .4454**
SCALE12        .1218**     .0156       .0637**    -.0985**     .1121**     .1095**    -.0625**    -.0104       .1232**     .0527*      .0994**
SCALE13       -.0339      -.0294      -.0439*      .0057      -.0459*      .0037      -.1915**     .2412**    -.4433**    -.1859**    -.2934**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)           " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                         Page  15
14:03:17    CORRELATIONS FOR WHITE MALE RESPONDENTS

                    - -  Correlation Coefficients  - -

             SCALE5     SCALE6     SCALE7     SCALE8     SCALE9     SCALE10    SCALE11    SCALE12    SCALE13

CHANGIND    -.0392     -.1589**   -.0415     -.0239     -.0155      .0235     -.0211     -.0535*     .0198
SEXIND         .          .          .          .          .          .          .          .          .
RACEIND        .          .          .          .          .          .          .          .          .
GREV         .0100      .0526*     .0277      .1527**   -.1442**    .4617**   -.1337**   -.1225**   -.0628**
GREQ         .0376      .1087**    .0291      .4199**   -.0920**    .0610**   -.2241**   -.0026      .0413
GREA         .0281      .0430*     .0751**    .3331**   -.2085**    .1685**   -.1690**   -.0644**    .0336
ETHNIC         .          .          .          .          .          .          .          .          .
UGPA        -.0066      .0100     -.0301      .3831**    .2794**    .1754**   -.0589**    .0346      .0197
FATHED       .0516*    -.0539*     .0806**    .0607**   -.1377**    .1047**   -.1123**   -.0745**    .0655**
MOTHED       .0062     -.0684**    .0213      .0171     -.2202**    .1004**   -.1252**   -.0822**    .1067**
ARTICIND    -.0380      .0628**   -.0170     -.0190      .0111      .0978**   -.0081      .0189     -.0747**
HONORIND    -.0160      .0682**   -.0685**    .2616**    .1972**    .1083**    .0075      .1218**   -.0339
UGPAM        .0292      .0010      .0133      .4072**    .2108**    .1427**   -.0039      .0156     -.0294
UGPA2        .0040      .0523*     .0512*     .4239**    .2486**    .1599**    .0196      .0637**   -.0439*
WORKHOUR    -.1056**   -.0227     -.0921**   -.0767**    .0003      .0395      .1220**   -.0985**    .0057
COMMHOUR    -.0089      .0618**    .0412      .0297     -.0160     -.0128      .0899**    .1121**   -.0459*
SCIAWARD     .0590**   -.0341     -.0263      .0615**    .0413     -.0020      .0556*     .1095**    .0037
DEGOBJ      -.0212      .1127**    .0729**    .0704**   -.0437*     .0611**    .0219     -.0625**   -.1915**
SCALE1      -.2049**   -.1500**   -.2439**   -.1818**   -.0111     -.1390**   -.1071**   -.0104      .2412**
SCALE2       .2846**    .4281**    .3405**    .1605**    .1341**    .0086      .2924**    .1232**   -.4433**
SCALE3       .3645**    .0915**    .5280**   -.0015      .0192      .0021      .2226**    .0527*    -.1859**
SCALE4       .2858**    .2250**    .4775**    .1145**    .1245**    .0503*     .4454**    .0994**   -.2934**
SCALE5      1.0000      .2211**    .4003**    .0270      .0218     -.0022      .2948**    .1189**   -.2018**
SCALE6       .2211**   1.0000      .1919**    .2213**    .0876**    .0350      .2446**    .1978**   -.4142**
SCALE7       .4003**    .1919**   1.0000      .0808**    .0738**    .0614**    .3349**    .1130**   -.2907**
SCALE8       .0270      .2213**    .0808**   1.0000      .2402**    .1771**    .0953**    .1109**   -.1419**
SCALE9       .0218      .0876**    .0738**    .2402**   1.0000      .2413**    .2533**    .1155**   -.1801**
SCALE10     -.0022      .0350      .0614**    .1771**    .2413**   1.0000      .1296**    .0427*    -.0800**
SCALE11      .2948**    .2446**    .3349**    .0953**    .2533**    .1296**   1.0000      .1056**   -.2590**
SCALE12      .1189**    .1978**    .1130**    .1109**    .1155**    .0427*     .1056**   1.0000     -.1506**
SCALE13     -.2018**   -.4142**   -.2907**   -.1419**   -.1801**   -.0800**   -.2590**   -.1506**   1.0000

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                                      Page  18
14:03:20    CORRELATIONS FOR WHITE FEMALE RESPONDENTS

                          - -  Correlation Coefficients  - -

               CHANGIND    SEXIND     RACEIND     GREV       GREQ       GREA       ETHNIC     UGPA       FATHED     MOTHED     ARTICIND

CHANGIND      1.0000        .           .         .0211     -.0157      .0072       .        -.0262     -.0033     -.0025     -.0076
SEXIND          .         1.0000        .           .          .          .         .           .          .          .          .
RACEIND         .           .         1.0000        .          .          .         .           .          .          .          .
GREV           .0211        .           .        1.0000      .4815**    .5491**     .         .2120**    .1383**    .1972**    .0984**
GREQ          -.0157        .           .         .4815**   1.0000      .7049**     .         .3765**    .2062**    .1134**    .1012**
GREA           .0072        .           .         .5491**    .7049**   1.0000       .         .2663**    .1425**    .1110**    .0245
ETHNIC          .           .           .           .          .          .       1.0000        .          .          .          .
UGPA          -.0262        .           .         .2120**    .3765**    .2663**     .        1.0000      .0164      .0140      .0880**
FATHED        -.0033        .           .         .1383**    .2062**    .1425**     .         .0164     1.0000      .5400**    .1042**
MOTHED        -.0025        .           .         .1972**    .1134**    .1110**     .         .0140      .5400**   1.0000      .1149**
ARTICIND      -.0076        .           .         .0984**    .1012**    .0245       .         .0880**    .1042**    .1149**   1.0000
HONORIND      -.0340        .           .         .0861**    .1313**    .0683*      .         .4527**   -.0626*    -.0586*     .0563
UGPAM         -.0506        .           .         .2006**    .2997**    .2440**     .         .7856**   -.0226      .0110      .0861**
UGPA2         -.0235        .           .         .2176**    .3263**    .2897**     .         .8489**    .0050      .0027      .0836**
WORKHOUR       .0819**      .           .        -.0089     -.1046**   -.0225       .        -.0767**   -.1314**   -.0960**   -.0017
COMMHOUR       .0279        .           .        -.0765**   -.0274      .0178       .         .0342      .0909**    .0476      .0670*
SCIAWARD      -.0289        .           .         .2103**    .0978**    .1303**     .         .1515**   -.0193      .0025      .0260
DEGOBJ        -.0593*       .           .         .2536**    .1345**    .1320**     .         .1279**   -.0123      .1104**    .1152**
SCALE1         .0500        .           .        -.0732*    -.0289     -.0882**     .        -.1844**   -.0557     -.0380      .0084
SCALE2        -.2150**      .           .        -.0216     -.0940**   -.0560       .         .0222     -.0562     -.0806**   -.0056
SCALE3        -.0709*       .           .         .0449     -.0380      .0198       .         .0901**   -.0270      .0292     -.0521
SCALE4        -.0843**      .           .        -.0627*    -.0888**   -.0728*      .         .2136**   -.0725*    -.0344     -.0595*
SCALE5        -.0860**      .           .        -.0263     -.0276     -.0358       .         .0242     -.0233      .0013     -.0602*
SCALE6        -.1535**      .           .         .0115     -.0256     -.0106       .         .0242     -.0173     -.0589*     .0173
SCALE7        -.0816**      .           .         .0158      .0244      .0038       .         .0182     -.0070      .0392     -.0498
SCALE8        -.0259        .           .         .2450**    .4189**    .3466**     .         .3812**    .0343     -.0033      .1050**
SCALE9        -.0316        .           .        -.1559**   -.0568*    -.1610**     .         .2864**   -.0577*    -.0486      .0644*
SCALE10        .0325        .           .         .4178**    .0479      .1018**     .         .0883**    .0333      .1463**    .0385
SCALE11       -.0276        .           .        -.1053**   -.1057**   -.1708**     .         .1346**   -.0622*    -.0190      .0200
SCALE12       -.1075**      .           .        -.0851**    .1014**   -.0088       .         .0440     -.0385      .0108      .0336
SCALE13       -.0139        .           .        -.0129      .1468**    .0708*      .         .0276      .0119      .0427     -.0435

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                                          Page  19
14:03:20    CORRELATIONS FOR WHITE FEMALE RESPONDENTS

                        - -  Correlation Coefficients  - -

            HONORIND  UGPAM     UGPA2     WORKHOUR  COMMHOUR  SCIAWARD  DEGOBJ    SCALE1    SCALE2    SCALE3    SCALE4

CHANGIND    -.0340    -.0506    -.0235     .0819**   .0279    -.0289    -.0593*    .0500    -.2150**  -.0709*   -.0843**
SEXIND         .         .         .         .         .         .         .         .         .         .         .
RACEIND        .         .         .         .         .         .         .         .         .         .         .
GREV         .0861**   .2006**   .2176**  -.0089    -.0765**   .2103**   .2536**  -.0732*   -.0216     .0449    -.0627*
GREQ         .1313**   .2997**   .3263**  -.1046**  -.0274     .0978**   .1345**  -.0289    -.0940**  -.0380    -.0888**
GREA         .0683*    .2440**   .2897**  -.0225     .0178     .1303**   .1320**  -.0882**  -.0560     .0198    -.0728*
ETHNIC         .         .         .         .         .         .         .         .         .         .         .
UGPA         .4527**   .7856**   .8489**  -.0767**   .0342     .1515**   .1279**  -.1844**   .0222     .0901**   .2136**
FATHED      -.0626*   -.0226     .0050    -.1314**   .0909**  -.0193    -.0123    -.0557    -.0562    -.0270    -.0725*
MOTHED      -.0586*    .0118     .0027    -.0960**   .0476     .0025     .1104**  -.0380    -.0806**   .0292    -.0344
ARTICIND     .0563     .0861**   .0836**  -.0017     .0670*    .0260     .1152**   .0084    -.0056    -.0521    -.0595*
HONORIND    1.0000     .4145**   .4012**  -.0252     .0638*    .0965**   .1212**  -.1202**   .0016    -.0157     .1423**
UGPAM        .4145**  1.0000     .7964**  -.0386     .0164     .1528**   .1408**  -.2364**   .1000**   .1167**   .2810**
UGPA2        .4012**   .7964**  1.0000    -.0357     .0659*    .1652**   .1605**  -.1965**   .0605*    .1148**   .2521**
WORKHOUR    -.0252    -.0386    -.0357    1.0000     .0144    -.0722*    .0729*    .0682*   -.0787**  -.1111**  -.0389
COMMHOUR     .0638*    .0164     .0659*    .0144    1.0000    -.0344    -.0132     .0251    -.0156    -.0465     .0236
SCIAWARD     .0965**   .1528**   .1652**  -.0722*   -.0344    1.0000     .1358**  -.0456     .0858**   .0759**   .1376**
DEGOBJ       .1212**   .1408**   .1605**   .0729*   -.0132     .1358**  1.0000    -.0226     .0191     .0064     .0596*
SCALE1      -.1202**  -.2364**  -.1965**   .0682*    .0251    -.0456    -.0226    1.0000    -.2811**  -.3352**  -.2656**
SCALE2       .0016     .1000**   .0605*   -.0787**  -.0156     .0858**   .0191    -.2811**  1.0000     .2546**   .3394**
SCALE3      -.0157     .1167**   .1148**  -.1111**  -.0465     .0759**   .0064    -.3352**   .2546**  1.0000     .3557**
SCALE4       .1423**   .2810**   .2521**  -.0389     .0236     .1376**   .0596*   -.2656**   .3394**   .3557**  1.0000
SCALE5       .0735*    .0700*    .0485    -.1091**  -.0269     .0832**  -.0258    -.1944**   .3004**   .3424**   .3798**
SCALE6       .0343     .0771**   .0581*    .0119     .0303     .0810**   .1807**  -.2430**   .4202**   .1975**   .3236**
SCALE7       .0018     .0495     .0571*   -.0600*    .0311     .1176**   .0106    -.1129**   .3167**   .4156**   .3874**
SCALE8       .2012**   .3678**   .3760**  -.0486     .0365     .1208**   .0985**  -.1363**   .1880**   .0464     .1643**
SCALE9       .1567**   .2842**   .3014**  -.0838**   .0711*    .0769**  -.0019     .0487     .1489**  -.0030     .1933**
SCALE10      .0382     .0743*    .0705*    .1029**   .0255     .1062**   .0954**   .0558     .0313    -.0300     .0645*
SCALE11      .0540     .1878**   .1761**  -.0223     .1400**   .0883**   .0482    -.0002     .2948**   .1359**   .5029**
SCALE12      .1081**   .0522     .0286    -.0593*    .0475    -.0497    -.0544    -.0006     .0411     .0455     .0783**
SCALE13     -.0363     .0009     .0004    -.0240    -.0743*   -.0412    -.0885**   .1190**  -.3406**  -.0257    -.1317**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                                 Page  20
14:03:20    CORRELATIONS FOR WHITE FEMALE RESPONDENTS

                             - -  Correlation Coefficients  - -

             SCALE5     SCALE6     SCALE7     SCALE8     SCALE9     SCALE10    SCALE11    SCALE12    SCALE13

CHANGIND    -.0860**   -.1535**   -.0816**   -.0259     -.0316      .0325     -.0276     -.1075**   -.0139
SEXIND         .          .          .          .          .          .          .          .          .
RACEIND        .          .          .          .          .          .          .          .          .
GREV        -.0263      .0115      .0158      .2450**   -.1559**    .4178**   -.1053**   -.0851**   -.0129
GREQ        -.0276     -.0256      .0244      .4189**   -.0568*     .0479     -.1057**    .1014**    .1468**
GREA        -.0358     -.0106      .0038      .3466**   -.1610**    .1018**   -.1708**   -.0088      .0708*
ETHNIC         .          .          .          .          .          .          .          .          .
UGPA         .0242      .0242      .0182      .3812**    .2864**    .0883**    .1346**    .0440      .0276
FATHED      -.0233     -.0173     -.0070      .0343     -.0577*     .0333     -.0622*    -.0385      .0119
MOTHED       .0013     -.0589*     .0392     -.0033     -.0486      .1463**   -.0198      .0108      .0427
ARTICIND    -.0602*     .0173     -.0498      .1050**    .0644*     .0385      .0200      .0336     -.0435
HONORIND     .0735*     .0343      .0018      .2012**    .1567**    .0382      .0540      .1081**   -.0363
UGPAM        .0700*     .0771**    .0495      .3678**    .2842**    .0743*     .1878**    .0522      .0009
UGPA2        .0485      .0581*     .0571*     .3760**    .3014**    .0705*     .1761**    .0286      .0004
WORKHOUR    -.1091**    .0119     -.0600*    -.0486     -.0838**    .1029**   -.0223     -.0593*    -.0240
COMMHOUR    -.0269      .0303      .0311      .0365      .0711*     .0255      .1400**    .0475     -.0743*
SCIAWARD     .0832**    .0810**    .1176**    .1208**    .0769**    .1062**    .0883**   -.0497     -.0412
DEGOBJ      -.0258      .1807**    .0106      .0985**   -.0019      .0954**    .0482     -.0544     -.0885**
SCALE1      -.1944**   -.2430**   -.1129**   -.1363**    .0487      .0558     -.0002     -.0006      .1190**
SCALE2       .3004**    .4202**    .3167**    .1888**    .1489**    .0313      .2948**    .0411     -.3406**
SCALE3       .3424**    .1975**    .4156**    .0464     -.0038     -.0300      .1359**    .0455     -.0257
SCALE4       .3798**    .3236**    .3874**    .1643**    .1933**    .0645*     .5029**    .0783**   -.1317**
SCALE5      1.0000      .2120**    .3696**    .0859**    .0736*    -.0018      .3372**    .1055**   -.1306**
SCALE6       .2120**   1.0000      .2029**    .2347**    .0925**    .1142**    .2742**    .1115**   -.3599**
SCALE7       .3696**    .2029**   1.0000      .2319**    .2410**    .1269**    .3775**    .2092**   -.2046**
SCALE8       .0859**    .2347**    .2319**   1.0000      .3255**    .2709**    .2733**    .1690**   -.1611**
SCALE9       .0736*     .0925**    .2410**    .3255**   1.0000      .2001**    .3891**    .1059**   -.1181**
SCALE10     -.0018      .1142**    .1269**    .2709**    .2001**   1.0000      .2001**   -.0278     -.0930**
SCALE11      .3372**    .2742**    .3775**    .2733**    .3891**    .2001**   1.0000      .1443**   -.2023**
SCALE12      .1055**    .1115**    .2092**    .1690**    .1059**   -.0278      .1443**   1.0000     -.1493**
SCALE13     -.1306**   -.3599**   -.2046**   -.1611**   -.1181**   -.0930**   -.2023**   -.1493**   1.0000

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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                         - -  Correlation Coefficients  - -

            CHANGIND    SEXIND      RACEIND     GREV        GREQ        GREA        ETHNIC      UGPA        FATHED      MOTHED      ARTICIND

CHANGIND    1.0000        .           .         -.1043      -.2868**    -.0726        .         -.1140      -.1988      -.1482      -.0265
SEXIND        .         1.0000        .           .           .           .           .           .           .           .           .
RACEIND       .           .         1.0000        .           .           .           .           .           .           .           .
GREV        -.1043        .           .         1.0000       .5934**     .6648**      .          .1304       .3420**     .2039*      .0079
GREQ        -.2868**      .           .          .5934**    1.0000       .7295**      .          .2425*      .3193**     .2033*     -.0301
GREA        -.0726        .           .          .6648**     .7295**    1.0000        .          .1889       .3471**     .3115**    -.0524
ETHNIC        .           .           .           .           .           .         1.0000        .           .           .           .
UGPA        -.1140        .           .          .1304       .2425*      .1889        .         1.0000      -.0248      -.0832       .1202
FATHED      -.1988        .           .          .3420**     .3193**     .3471**      .         -.0248      1.0000       .4956**    -.1311
MOTHED      -.1482        .           .          .2039*      .2033*      .3115**      .         -.0832       .4956**    1.0000      -.0575
ARTICIND    -.0265        .           .          .0079      -.0301      -.0524        .          .1202      -.1311      -.0575      1.0000
HONORIND    -.0208        .           .          .0389       .1161       .0524        .          .5816**    -.0324      -.0740       .0332
UGPAM       -.0487        .           .         -.1361       .0231      -.0092        .          .6916**    -.1164      -.2205*      .0697
UGPA2       -.0935        .           .          .0629       .2468*      .1978        .          .7137**    -.1055      -.1349       .0825
WORKHOUR     .1421        .           .         -.0979      -.1593      -.0848        .         -.2377*     -.2172*     -.0829       .0832
COMMHOUR     .1600        .           .         -.0516      -.1972      -.1283        .         -.0847      -.0015       .0973       .0998
SCIAWARD    -.0727        .           .          .0012      -.0473      -.0027        .          .1354      -.2393*     -.1414      -.0591
DEGOBJ      -.0791        .           .         -.0078      -.1098      -.0466        .         -.0081      -.1105      -.0650      -.0177
SCALE1       .1390        .           .          .3412**     .2733**     .3790**      .          .0034       .2587*      .2096*     -.1003
SCALE2      -.1059        .           .         -.3290**    -.2680**    -.4393**      .          .1842      -.2385*     -.2612*      .0225
SCALE3      -.0717        .           .         -.3220**    -.3441**    -.3694**      .          .0941      -.1658      -.1850       .0837
SCALE4      -.0836        .           .         -.1287      -.0711      -.1677        .          .2513*     -.1059      -.1802      -.0187
SCALE5       .0690        .           .         -.1249      -.0471      -.1347        .          .1119      -.0099      -.0333      -.0139
SCALE6      -.2604*       .           .         -.0360       .0186      -.0752        .          .2595*     -.1009      -.0557       .1599
SCALE7      -.0420        .           .         -.0084      -.0770      -.1593        .         -.0422       .0513      -.0908      -.0481
SCALE8      -.1829        .           .         -.0766       .1853      -.0241        .          .2209*     -.0086      -.0319      -.0008
SCALE9      -.1372        .           .         -.1975      -.0984      -.2295*       .          .3456**    -.0161      -.1411       .1138
SCALE10      .1016        .           .          .1599      -.0042      -.0382        .          .0304      -.0502      -,0163      -.0259
SCALE11      .1304        .           .         -.2656**    -.1170      -.2214*       .          .1686      -.0745      -.1186      -.0158
SCALE12      .0008        .           .         -.1338      -.2235*     -.2108*       .          .1855      -.0864       .0650      -.1299
SCALE13     -.0209        .           .         -.0131       .2845**     .3125**      .         -.0730       .0510       .0012      -.0975

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                                        Page  24
14:03:23    CORRELATIONS FOR BLACK MALE RESPONDENTS

                           - -  Correlation Coefficients  - -

            HONORIND   UGPAM      UGPA2      WORKHOUR   COMMHOUR   SCIAWARD   DEGOBJ     SCALE1     SCALE2     SCALE3     SCALE4

CHANGIND    -.0208     -.0487     -.0935      .1421      .1600     -.0727     -.0791      .1390     -.1059     -.0717     -.0836
SEXIND        .          .          .          .          .          .          .          .          .          .          .
RACEIND       .          .          .          .          .          .          .          .          .          .          .
GREV         .0389     -.1361      .0629     -.0979     -.0516      .0012     -.0078      .3412**   -.3290**   -.3220**   -.1287
GREQ         .1161      .0231      .2468*    -.1593     -.1972     -.0473     -.1098      .2733**   -.2680**   -.3441**   -.0711
GREA         .0524     -.0092      .1978     -.0848     -.1283     -.0027     -.0466      .3790**   -.4393**   -.3694**   -.1677
ETHNIC        .          .          .          .          .          .          .          .          .          .          .
UGPA         .5816**    .6916**    .7137**   -.2377*    -.0847      .1354     -.0081      .0034      .1842      .0941      .2513*
FATHED      -.0324     -.1164     -.1055     -.2172*    -.0015     -.2393*    -.1105      .2587*    -.2385*    -.1658     -.1059
MOTHED      -.0740     -.2205*    -.1349     -.0829      .0973     -.1414     -.0650      .2096*    -.2612*    -.1850     -.1802
ARTICIND     .0332      .0697      .0825      .0832      .0998     -.0591     -.0177     -.1003      .0225      .0837     -.0187
HONORIND    1.0000      .5088**    .3612**   -.1860     -.1094      .0647      .0067     -.0568      .1912      .0726      .2101*
UGPAM        .5088**   1.0000      .6897**   -.1523     -.1639      .2306*     .0212     -.1130      .2797**    .2106*     .2330*
UGPA2        .3612**    .6897**   1.0000     -.2166*    -.2376*     .1533     -.0461     -.0103      .1281      .0605      .1567
WORKHOUR    -.1860     -.1523     -.2166*    1.0000      .2873**    .0041      .2287*    -.0123      .0376      .0711      .0553
COMMHOUR    -.1094     -.1639     -.2376*     .2873**   1.0000     -.1248      .1312      .0723     -.2360*    -.2072*    -.2756**
SCIAWARD     .0647      .2306*     .1533      .0041     -.1248     1.0000      .3368**   -.1756      .2248*     .1226      .1410
DEGOBJ       .0067      .0212     -.0461      .2287*     .1312      .3368**   1.0000     -.1787      .2765**    .1205      .1026
SCALE1      -.0568     -.1130     -.0103     -.0123      .0723     -.1756     -.1787     1.0000     -.3756**   -.4229**   -.2598*
SCALE2       .1912      .2797**    .1281      .0376     -.2360*     .2248*     .2765**   -.3756**   1.0000      .4446**    .5534**
SCALE3       .0726      .2106*     .0605      .0711     -.2072*     .1226      .1205     -.4229**    .4446**   1.0000      .4672**
SCALE4       .2101*     .2330*     .1567      .0553     -.2756**    .1410      .1026     -.2598*     .5534**    .4672**   1.0000
SCALE5       .1742      .1035     -.0496     -.1824     -.2543*    -.0184     -.1222     -.2072*     .2865**    .4240**    .4683**
SCALE6       .1703      .1772      .2506*    -.0306     -.1247      .0340      .2423*    -.1577      .4506**    .2925**    .2804**
SCALE7       .0616     -.0112     -.1220      .0582     -.0498      .0570      .2317*    -.1937      .2047*     .4204**    .2906**
SCALE8       .2603*     .1829      .1154     -.0837     -.2552*     .1537      .1528     -.2168*     .2526*     .1227      .3260**
SCALE9       .1366      .3730**    .4146**   -.0566     -.0755      .2459*     .1496     -.2457*     .2884**    .2155*     .2627*
SCALE10      .0024      .0559      .0238      .0254      .0241      .1317     -.0404     -.0788      .0589      .1160      .0806
SCALE11      .1230      .2466*     .2085*    -.0665     -.1040      .1659      .1370     -.2859**    .2994**    .3941**    .4284**
SCALE12      .0782      .1511      .0323     -.0318      .1099      .1465      .0106     -.1185      .2265*     .0325      .1269
SCALE13      .0657     -.0591     -.0433     -.1014      .1259      .0464     -.1646      .2656**   -.4751**   -.2474*    -.2102*

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                                      Page  25
14:03:23    CORRELATIONS FOR BLACK MALE RESPONDENTS

                         - -  Correlation Coefficients  - -

              SCALE5     SCALE6     SCALE7     SCALE8     SCALE9     SCALE10    SCALE11    SCALE12    SCALE13

CHANGIND      .0690     -.2604*    -.0420     -.1829     -.1372      .1016      .1304      .0008     -.0209
SEXIND          .          .          .          .          .          .          .          .          .
RACEIND         .          .          .          .          .          .          .          .          .
GREV         -.1249     -.0360     -.0084     -.0766     -.1975      .1599     -.2656**   -.1338     -.0131
GREQ         -.0471      .0186     -.0770      .1853     -.0984     -.0042     -.1170     -.2235*     .2845**
GREA         -.1347     -.0752     -.1593     -.0241     -.2295*    -.0382     -.2214*    -.2108*     .3125**
ETHNIC          .          .          .          .          .          .          .          .          .
UGPA          .1119      .2595*    -.0422      .2209*     .3456**    .0304      .1686      .1855     -.0730
FATHED       -.0099     -.1009      .0513     -.0086     -.0161     -.0502     -.0745     -.0864      .0510
MOTHED       -.0333     -.0557     -.0908     -.0319     -.1411     -.0163     -.1186      .0650      .0012
ARTICIND     -.0139      .1599     -.0481     -.0008      .1138     -.0259     -.0158     -.1299     -.0975
HONORIND      .1742      .1703      .0616      .2603*     .1366      .0024      .1230      .0782      .0657
UGPAM         .1035      .1772     -.0112      .1829      .3730**    .0559      .2466*     .1511     -.0591
UGPA2        -.0496      .2506*    -.1220      .1154      .4146**    .0238      .2085*     .0323     -.0433
WORKHOUR     -.1824     -.0306      .0582     -.0837     -.0566      .0254     -.0665     -.0318     -.1014
COMMHOUR     -.2543*    -.1247     -.0498     -.2552*    -.0755      .0241     -.1040      .1099      .1259
SCIAWARD     -.0184      .0340      .0570      .1537      .2459*     .1317      .1659      .1465      .0464
DEGOBJ       -.1222      .2423*     .2317*     .1528      .1496     -.0404      .1370      .0106     -.1646
SCALE1       -.2072*    -.1577     -.1937     -.2168*    -.2457*    -.0788     -.2859**   -.1185      .2656**
SCALE2        .2865**    .4506**    .2047*     .2526*     .2884**    .0589      .2994**    .2265*    -.4751**
SCALE3        .4240**    .2925**    .4204**    .1227      .2155*     .1160      .3941**    .0325     -.2474*
SCALE4        .4683**    .2804**    .2906**    .3260**    .2627*     .0806      .4284**    .1269     -.2102*
SCALE5       1.0000      .0878      .3221**    .1966      .0605      .0981      .4307**    .1368     -.1027
SCALE6        .0878     1.0000      .0032      .1069      .2447*     .0223      .0210      .1187     -.3797**
SCALE7        .3221**    .0032     1.0000      .2269*     .1050      .1417      .2963**   -.0740     -.1298
SCALE8        .1966      .1069      .2269*    1.0000      .3478**    .0874      .3106**    .1625     -.1048
SCALE9        .0605      .2447*     .1050      .3478**   1.0000      .2755**    .4554**    .1934     -.1639
SCALE10       .0981      .0223      .1417      .0874      .2755**   1.0000      .2053*     .0551     -.1158
SCALE11       .4307**    .0210      .2963**    .3106**    .4554**    .2053*    1.0000      .1691     -.0637
SCALE12       .1368      .1187     -.0740      .1625      .1934      .0551      .1691     1.0000     -.3599**
SCALE13      -.1027     -.3797**   -.1298     -.1048     -.1639     -.1158     -.0637     -.3599**   1.0000

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                              Page  28
14:03:26    CORRELATIONS FOR BLACK FEMALE RESPONDENTS

                                   - -  Correlation Coefficients  - -

              CHANGIND   SEXIND     RACEIND    GREV       GREQ       GREA       ETHNIC     UGPA       FATHED     MOTHED     ARTICIND

CHANGIND       1.0000      .          .         -.0518      .0221     -.0330      .         -.0626     -.0786     -.0718      .1554
SEXIND          .         1.0000      .          .          .          .          .          .          .          .          .
RACEIND         .          .         1.0000      .          .          .          .          .          .          .          .
GREV           -.0518      .          .         1.0000      .5995**    .6940**    .          .0196      .3388**    .2479**    .0854
GREQ            .0221      .          .          .5995**   1.0000      .7643**    .          .1240      .2318**    .1099      .0170
GREA           -.0330      .          .          .6940**    .7643**   1.0000      .          .2050*     .2281*     .1878*     .0783
ETHNIC          .          .          .          .          .          .         1.0000      .          .          .          .
UGPA           -.0626      .          .          .0196      .1240      .2050*     .         1.0000     -.0980     -.1496     -.0443
FATHED         -.0786      .          .          .3388**    .2318**    .2281*     .         -.0980     1.0000      .6137**    .0141
MOTHED         -.0718      .          .          .2479**    .1099      .1878*     .         -.1496      .6137**   1.0000      .0674
ARTICIND        .1554      .          .          .0854      .0170      .0783      .         -.0443      .0141      .0674     1.0000
HONORIND       -.0365      .          .         -.1009     -.0383      .0113      .          .4474**   -.0625     -.1703     -.0312
UGPAM          -.1013      .          .         -.1027      .0477      .0987      .          .7344**   -.1308     -.2245*    -.0410
UGPA2          -.0436      .          .          .0754      .1779*     .2161*     .          .7752**   -.1276     -.1458     -.0125
WORKHOUR        .0642      .          .          .0801     -.0588     -.0109      .         -.1835*    -.0424      .0447      .1454
COMMHOUR       -.0198      .          .          .1362      .0932      .0737      .         -.0499      .1367      .1232     -.0265
SCIAWARD       -.0804      .          .          .0624      .0124     -.0234      .          .1200     -.0374     -.0196     -.1077
DEGOBJ         -.0677      .          .          .0542     -.1075     -.0273      .          .1545     -.1391     -.0639      .1487
SCALE1          .1569      .          .         -.0171      .1391      .1060      .         -.1357      .0167      .0578      .0634
SCALE2         -.2332**    .          .         -.1365     -.2272**   -.2326**    .          .1052      .0203      .0132     -.0703
SCALE3          .0193      .          .         -.0086     -.0990     -.1160      .          .1333     -.1342     -.2168*    -.0032
SCALE4         -.0599      .          .         -.1230     -.0673     -.0123      .          .3136**   -.0751     -.0561     -.0640
SCALE5          .0145      .          .         -.0698     -.0610      .0144      .          .1387     -.0593     -.0507     -.0271
SCALE6         -.1969*     .          .         -.1230     -.1701     -.2429**    .         -.0198     -.0899      .0105      .0228
SCALE7         -.0951      .          .          .1187      .0806      .0879      .          .0533      .0138     -.0107     -.0240
SCALE8         -.1131      .          .          .0622      .1437      .1436      .          .5007**    .0677      .0516     -.0126
SCALE9         -.1163      .          .         -.2031*    -.2213*    -.2054*     .          .3656**    .1111      .0903     -.0570
SCALE10         .0789      .          .          .1730*    -.1114      .0019      .          .0782      .1760*     .0591      .0738
SCALE11        -.1307      .          .         -.3543**   -.3101**   -.1770*     .          .2019*    -.0893     -.1276      .0205
SCALE12        -.1349      .          .         -.0800     -.1570     -.1253      .          .0715      .0085     -.0026      .0315
SCALE13        -.0696      .          .         -.0091      .1218      .0373      .         -.0239      .0110     -.0113     -.0299

* - Signif. LE .05     ** - Signif. LE .01     (2-tailed)          " . " printed if a coefficient cannot be computed
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                   - -  Correlation Coefficients  - -

           HONORIND   UGPAM     UGPA2      WORKHOUR   COMMHOUR   SCIAWARD   DEGOBJ     SCALE1     SCALE2     SCALE3     SCALE4

CHANGIND   -.0365     -.1013    -.0436      .0642     -.0198     -.0804     -.0677      .1569     -.2332**    .0193     -.0599
SEXIND        .          .         .          .          .          .          .          .          .          .          .
RACEIND       .          .         .          .          .          .          .          .          .          .          .
GREV       -.1009     -.1027     .0754      .0801      .1362      .0624      .0542     -.0171     -.1365     -.0086     -.1230
GREQ       -.0383      .0477     .1779*    -.0588      .0932      .0124     -.1075      .1391     -.2272**   -.0990     -.0673
GREA        .0113      .0987     .2161*    -.0109      .0737     -.0234     -.0273      .1060     -.2326**   -.1160     -.0123
ETHNIC        .          .         .          .          .          .          .          .          .          .          .
UGPA        .4474**    .7344**   .7752**   -.1835*    -.0499      .1200      .1545     -.1357      .1052      .1333      .3136**
FATHED     -.0625     -.1308    -.1276     -.0424      .1367     -.0374     -.1391      .0167      .0203     -.1342     -.0751
MOTHED     -.1703     -.2245*   -.1458      .0447      .1232     -.0196     -.0639      .0578      .0132     -.2168*    -.0561
ARTICIND   -.0312     -.0410    -.0125      .1454     -.0265     -.1077      .1487      .0634     -.0703     -.0032     -.0640
HONORIND   1.0000      .3696**   .4094**   -.2498**   -.0277      .1380      .0575     -.1359      .0592     -.0183      .1992*
UGPAM       .3696**   1.0000     .7217**   -.1040     -.0668      .2263*     .0801     -.1698      .1346      .0396      .2353**
UGPA2       .4094**    .7217**  1.0000     -.1616     -.1566      .1489      .0927     -.1837*     .1466      .1748*     .2713**
WORKHOUR   -.2498**   -.1040    -.1616     1.0000      .0134     -.0480      .1984*     .0349     -.1546      .0804     -.0544
COMMHOUR   -.0277     -.0668    -.1566      .0134     1.0000     -.1019     -.0342      .1278     -.0296     -.1429     -.1028
SCIAWARD    .1380      .2263*    .1489     -.0480     -.1019     1.0000      .2040*    -.3045**    .0801     -.0204     -.0088
DEGOBJ      .0575      .0801     .0927      .1984*    -.0342      .2040*    1.0000     -.1061      .0818      .0365      .0342
SCALE1     -.1359     -.1698    -.1837*     .0349      .1278     -.3045**   -.1061     1.0000     -.3578**   -.3716**   -.1970*
SCALE2      .0592      .1346     .1466     -.1546     -.0296      .0801      .0818     -.3578**   1.0000      .3062**    .3824**
SCALE3     -.0183      .0396     .1748*     .0804     -.1429     -.0204      .0365     -.3716**    .3062**   1.0000      .3478**
SCALE4      .1992*     .2353**   .2713**   -.0544     -.1028     -.0088      .0342     -.1970*     .3824**    .3478**   1.0000
SCALE5      .0520      .1123     .1450      .0342     -.0652      .1326     -.0261     -.1535      .2529**    .3371**    .5108**
SCALE6     -.0676      .0154     .0954      .0648      .0281      .1298      .1782*    -.1829*     .5061**    .1761*     .2949**
SCALE7     -.1129     -.0108     .0984      .0042     -.0411      .0872      .0021     -.1450      .2604**    .4681**    .4666**
SCALE8      .1972*     .4286**   .5149**   -.0099     -.0363      .0648      .0485     -.1482      .2017*     .0241      .3000**
SCALE9      .1454      .3008**   .3080**   -.0787      .0900      .0699      .0583     -.1161      .3307**   -.0126      .2727**
SCALE10     .1271      .0635     .1316      .1123      .0744     -.0247      .0461     -.0709      .1740*     .0132      .2074*
SCALE11     .1993*     .2104*    .1966*    -.0267     -.0550     -.0079      .1512     -.3040**    .4011**    .2219*     .5158**
SCALE12     .0235     -.0014    -.0042     -.0192      .0372      .1310      .0529     -.0493      .4089**   -.0118      .0999
SCALE13     .1154     -.0263    -.0102     -.0957     -.0137     -.1081     -.1860*     .1301     -.3591**   -.2123*    -.2086*

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                                         Page  30
14:03:26    CORRELATIONS FOR BLACK FEMALE RESPONDENTS

                        - -  Correlation Coefficients  - -

             SCALE5     SCALE6     SCALE7     SCALE8     SCALE9     SCALE10    SCALE11    SCALE12    SCALE13

CHANGIND     .0145     -.1969*    -.0951     -.1131     -.1163      .0789     -.1307     -.1349     -.0696
SEXIND        .          .          .          .          .          .          .          .          .
RACEIND       .          .          .          .          .          .          .          .          .
GREV        -.0698     -.1230      .1187      .0622     -.2031*     .1730*    -.3543**   -.0800     -.0091
GREQ        -.0610     -.1701      .0806      .1437     -.2213*    -.1114     -.3101**   -.1570      .1218
GREA         .0144     -.2429**    .0879      .1436     -.2054*     .0019     -.1770*    -.1253      .0373
ETHNIC        .          .          .          .          .          .          .          .          .
UGPA         .1387     -.0198      .0533      .5007**    .3656**    .0782      .2019*     .0715     -.0239
FATHED      -.0593     -.0899      .0138      .0677      .1111      .1760*    -.0893      .0085      .0110
MOTHED      -.0507      .0105     -.0107      .0516      .0903      .0591     -.1276     -.0026     -.0113
ARTICIND    -.0271      .0228     -.0240     -.0126     -.0570      .0738      .0205      .0315     -.0299
HONORIND     .0520     -.0676     -.1129      .1972*     .1454      .1271      .1993*     .0235      .1154
UGPAM        .1123      .0154     -.0108      .4206**    .3008**    .0635      .2104*    -.0014     -.0263
UGPA2        .1450      .0954      .0984      .5149**    .3080**    .1316      .1966*    -.0042     -.0102
WORKHOUR     .0342      .0640      .0042     -.0099     -.0787      .1123     -.0267     -.0192     -.0957
COMMHOUR    -.0652      .0281     -.0411     -.0363      .0900      .0744     -.0550      .0372     -.0137
SCIAWARD     .1326      .1298      .0872      .0648      .0699     -.0247     -.0079      .1310     -.1001
DEGOBJ      -.0261      .1782*     .0021      .0405      .0583      .0461      .1512      .0529     -.1860*
SCALE1      -.1535     -.1829*    -.1450     -.1402     -.1161     -.0709     -.3040**   -.0493      .1301
SCALE2       .2529**    .5061**    .2604**    .2017*     .3307**    .1740*     .4011**    .4089**   -.3591**
SCALE3       .3371**    .1761*     .4681**    .0261     -.0126      .0132      .2219*    -.0118     -.2123*
SCALE4       .5108**    .2949**    .4466**    .3000**    .2727**    .2074*     .5150**    .0999     -.2086*
SCALE5      1.0000      .2065*     .4858**    .1755*     .0325      .1109      .3755**    .1754*    -.2540**
SCALE6       .2065*    1.0000      .2404**    .2445**    .3267**    .1997*     .2940**    .2805**   -.4404**
SCALE7       .4858**    .2404**   1.0000      .1837*     .0949      .1370      .2786**    .0762     -.1925*
SCALE8       .1755*     .2445**    .1837*    1.0000      .5314**    .4409**    .2572**    .1451     -.2280**
SCALE9       .0325      .3267**    .0949      .5314**   1.0000      .3907**    .3769**    .2654**   -.2765**
SCALE10      .1109      .1997*     .1370      .4409**    .3907**   1.0000      .2135*     .1652     -.3091**
SCALE11      .3755**    .2940**    .2786**    .2572**    .3769**    .2135*    1.0000      .1854*    -.2225*
SCALE12      .1754*     .2805**    .0762      .1451      .2654**    .1652      .1854*    1.0000     -.3950**
SCALE13     -.2540**   -.4404**   -.1925*    -.2280**   -.2765**   -.3091**   -.2225*    -.3950**   1.0000

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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14:03:28    CORRELATIONS FOR ASIAN MALE RESPONDENTS

                       - -  Correlation Coefficients  - -

            CHANGIND   SEXIND    RACEIND   GREV      GREQ      GREA      ETHNIC    UGPA      FATHED    MOTHED    ARTICIND

CHANGIND    1.0000      .         .        -.0226    -.0331     .0171     .        -.0591     .0743     .0906     .1646*
SEXIND       .         1.0000     .         .         .         .         .         .         .         .         .
RACEIND      .          .        1.0000     .         .         .         .         .         .         .         .
GREV        -.0226      .         .        1.0000     .4395**   .6506**   .         .3503**   .2577**   .2180**   .0838
GREQ        -.0331      .         .         .4395**  1.0000     .5702**   .         .5759**   .2083*    .1378     .1016
GREA         .0171      .         .         .6506**   .5702**  1.0000     .         .4081**   .2522**   .1789*    .1396
ETHNIC       .          .         .         .         .         .        1.0000     .         .         .         .
UGPA        -.0591      .         .         .3503**   .5759**   .4081**   .        1.0000     .1433     .1162     .1228
FATHED       .0743      .         .         .2577**   .2083*    .2522**   .         .1433    1.0000     .6558**   .1314
MOTHED       .0906      .         .         .2180**   .1378     .1789*    .         .1162     .6558**  1.0000     .0833
ARTICIND     .1646*     .         .         .0838     .1016     .1396     .         .1228     .1314     .0833    1.0000
HONORIND    -.0167      .         .         .0967     .2962**   .1548     .         .6246**   .0331     .1171     .1424
UGPAM       -.0827      .         .         .3702**   .4975**   .3477**   .         .8083**   .1472     .1249     .0838
UGPA2       -.0469      .         .         .2921**   .4613**   .2753**   .         .8416**   .1281     .0625     .1055
WORKHOUR    -.1281      .         .        -.0682    -.2811**  -.1484     .        -.1354    -.0286    -.0036     .0585
COMMHOUR     .0809      .         .         .1135    -.9335     .1462     .         .1322     .0877     .0422     .0250
SCIAWARD    -.0599      .         .         .1343     .1416     .1992*    .         .2442**   .0507     .0633     .1516
DEGOBJ      -.0483      .         .         .2809**   .1944*    .2673**   .         .0888     .0705     .0218     .1519
SCALE1       .0135      .         .        -.0916    -.0766    -.0655     .        -.1582    -.0227     .0275    -.0176
SCALE2      -.2654**    .         .        -.0525     .0302    -.0206     .         .1643*   -.0337    -.0106     .0155
SCALE3      -.0938      .         .         .0000     .0185     .0063     .         .0264    -.0175    -.0855    -.0136
SCALE4      -.0940      .         .         .0593     .0556     .0275     .         .0213     .0753    -.0547     .0201
SCALE5      -.0846      .         .         .1456    -.0063     .0033     .         .0197     .0852    -.0375    -.0481
SCALE6      -.1507      .         .         .0086     .0403    -.0308     .         .1425    -.0183    -.0412     .1107
SCALE7      -.0208      .         .         .0589     .0663     .0556     .         .1013    -.0045    -.0622    -.0337
SCALE8      -.1235      .         .         .1333     .3030**   .2681**   .         .4529**   .1610*    .1287     .0130
SCALE9      -.1207      .         .        -.1534     .0675    -.1661*    .         .2857**   .0036    -.0301    -.0915
SCALE10      .0668      .         .         .4216**   .0722     .2879**   .         .1064     .1133     .0305     .0582
SCALE11     -.0084      .         .        -.0725    -.0952    -.1401     .        -.0065     .1242     .0538     .0352
SCALE12     -.0167      .         .        -.0257     .0789    -.0520     .         .1050     .1017    -.0079    -.1142
SCALE13      .0439      .         .        -.1795*    .0056    -.0351     .        -.1232    -.0465    -.0080     .0049

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                                          Page  34
14:03:28    CORRELATIONS FOR ASIAN MALE RESPONDENTS

                              - -  Correlation Coefficients  - -

            HONORIND    UGPAM       UGPA2       WORKHOUR    COMMHOUR    SCIAWARD    DEGOBJ      SCALE1      SCALE2      SCALE3      SCALE4

CHANGIND    -.0167      -.0827      -.0469      -.1281       .0809      -.0599      -.0483       .0135      -.2654**    -.0938      -.0940
SEXIND        .           .           .           .           .           .           .           .           .           .           .
RACEIND       .           .           .           .           .           .           .           .           .           .           .
GREV         .0967       .3702**     .2921**    -.0682       .1135       .1343       .2809**    -.0916      -.0525       .0000       .0593
GREQ         .2962**     .4975**     .4613**    -.2811**    -.0335       .1416       .1944*     -.0766       .0302       .0185       .0556
GREA         .1540       .3477**     .2753**    -.1484       .1462       .1992*      .2673**    -.0655      -.0206       .0063       .0275
ETHNIC        .           .           .           .           .           .           .           .           .           .           .
UGPA         .6246**     .8083**     .8416**    -.1354       .1322       .2442**     .0888      -.1582       .1643*      .0264       .0213
FATHED       .0331       .1472       .1281      -.0286       .0877       .0507       .0705      -.0227      -.0337      -.0175       .0753
MOTHED       .1171       .1249       .0625      -.0036       .0422       .0633       .0218       .0275      -.0106      -.0855      -.0547
ARTICIND     .1424       .0838       .1055       .0585       .0250       .1516       .1519      -.0176       .0155      -.0136       .0201
HONORIND    1.0000       .5516**     .5635**    -.1640*      .1686*      .1994*     -.0328      -.1018       .1167       .1345       .1184
UGPAM        .5516**    1.0000       .8449**    -.0514       .1343       .2620**     .1338      -.2095**     .2392**     .0940       .1473
UGPA2        .5635**     .8449**    1.0000      -.0654       .1183       .2482**     .1580      -.2029*      .1626*      .0268       .1299
WORKHOUR    -.1640*     -.0514      -.0654      1.0000       .0593       .0580       .0624       .1013      -.0519      -.0889      -.0006
COMMHOUR     .1686*      .1343       .1183       .0593      1.0000      -.0013       .0581      -.0240      -.1018      -.0423       .0290
SCIAWARD     .1994*      .2620**     .2482**     .0580      -.0013      1.0000      -.0098      -.0704      -.0409      -.0785      -.0634
DEGOBJ      -.0328       .1338       .1580       .0624       .0581      -.0098      1.0000      -.1242       .0717       .0469       .2137**
SCALE1      -.1018      -.2095**    -.2029*      .1013      -.0240      -.0704      -.1242      1.0000      -.2773**    -.3336**    -.3488**
SCALE2       .1167       .2392**     .1626*     -.0519      -.1018      -.0409       .0717      -.2773**    1.0000       .3696**     .4310**
SCALE3       .1345       .0940       .0268      -.0889      -.0423      -.0785       .0469      -.3336**     .3696**    1.0000       .4060**
SCALE4       .1184       .1473       .1299      -.0006       .0290      -.0634       .2137**    -.3488**     .4310**     .4060**    1.0000
SCALE5       .0176       .0684       .0548       .0006      -.0273       .0044      -.0258      -.1915*      .2494**     .3641**     .4394**
SCALE6       .0438       .2011*      .2000*      .0367      -.1685*     -.0492       .1529      -.2887**     .5304**     .1546       .3456**
SCALE7       .1392       .1577       .1564      -.0536      -.0458      -.0819      -.0529       .0452       .3762**     .3581**     .4161**
SCALE8       .2877**     .4240**     .4289**    -.0821      -.0882       .1460       .1053      -.1066       .2394**     .1436       .2274**
SCALE9       .2262**     .2516**     .3094**    -.1414      -.0427       .0641      -.0128       .0059       .3621**     .0957       .1402
SCALE10      .0511       .1202       .1513      -.0395       .1140       .1099       .1576       .0534      -.0702      -.0204       .0735
SCALE11     -.0232       .0667       .0756       .1021      -.0386       .0251       .0172      -.0296       .2355**     .1737*      .5218**
SCALE12      .1313       .1020       .1301      -.1001       .0332      -.0068       .0384      -.0845       .1297       .0555       .0616
SCALE13     -.0085      -.1938*     -.2113**    -.0417       .0785       .0010      -.1994*      .2076*     -.4477**    -.2927**    -.3117**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                                                    Page  35
14:03:28    CORRELATIONS FOR ASIAN MALE RESPONDENTS

                                - -  Correlation Coefficients  - -

             SCALE5      SCALE6      SCALE7      SCALE8      SCALE9      SCALE10     SCALE11     SCALE12     SCALE13

CHANGIND    -.0846      -.1507      -.0208      -.1235      -.1207       .0668      -.0084      -.0167       .0439
SEXIND         .           .           .           .           .           .           .           .           .
RACEIND        .           .           .           .           .           .           .           .           .
GREV         .1456       .0086       .0589       .1333      -.1534       .4216**    -.0725      -.0257      -.1795*
GREQ        -.0063       .0403       .0663       .3030**     .0675       .0722      -.0952       .0789       .0056
GREA         .0033      -.0308       .0556       .2681**    -.1661*      .2879**    -.1401      -.0320      -.0351
ETHNIC         .           .           .           .           .           .           .           .           .
UGPA         .0197       .1425       .1013       .4529**     .2857**     .1064      -.0065       .1050      -.1232
FATHED       .0852      -.0183      -.0045       .1610*      .0036       .1133       .1242       .1017      -.0465
MOTHED      -.0375      -.0412      -.0622       .1287      -.0301       .0305       .0538      -.0079      -.0800
ARTICIND    -.0481       .1107      -.0337       .0130      -.0915       .0582       .0352      -.1142       .0049
HONORIND     .0176       .0430       .1392       .2877**     .2262**     .0511      -.0232       .1313      -.0085
UGPAM        .0684       .2011*      .1577       .4240**     .2516**     .1202       .0667       .1020      -.1930*
UGPA2        .0548       .2000*      .1564       .4289**     .3094**     .1513       .0756       .1381      -.2113**
WORKHOUR     .0806       .0367      -.0536      -.0821      -.1414      -.0395       .1021      -.1081      -.0417
COMMHOUR    -.0273      -.1685*     -.0458      -.0882      -.0427       .1140      -.0386       .0332       .0785
SCIAWARD     .0044      -.0492      -.0819       .1460       .0641       .1099       .0251      -.0068       .0010
DEGOBJ      -.0258       .1529      -.0529       .1053      -.0128       .1576       .0172       .0384      -.1994*
SCALE1      -.1915*     -.2887**     .0452      -.1066       .0059       .0534      -.0296      -.0845       .2076*
SCALE2       .2494**     .5304**     .3762**     .2394**     .3621**    -.0702       .2355**     .1297      -.4477**
SCALE3       .3641**     .1546       .3581**     .1436       .0957      -.0204       .1737*      .0555      -.2927**
SCALE4       .4394**     .3456**     .4161**     .2274**     .1402       .0735       .5218**     .0616      -.3117**
SCALE5      1.0000       .1706*      .3527**     .0861       .1858*      .1819*      .4311**     .0646      -.3054**
SCALE6       .1706*     1.0000       .1290       .2578**     .2919**    -.0676       .2246**     .0397      -.4587**
SCALE7       .3527**     .1290      1.0000       .2411**     .3712**     .1889*      .4221**     .0369      -.2219**
SCALE8       .0861       .2578**     .2411**    1.0000       .4378**     .2971**     .2879**     .0582      -.2222**
SCALE9       .1858*      .2919**     .3712**     .4378**    1.0000       .2367**     .2716**     .1958*      -.2341**
SCALE10      .1819*     -.0676       .1889*      .2971**     .2367**    1.0000       .2627**     .1060      -.1943*
SCALE11      .4311**     .2246**     .4221**     .2879**     .2716**     .2627**    1.0000       .0210      -.2973**
SCALE12      .0646       .0397       .0369       .0582       .1958*      .1060       .0210      1.0000      -.0437
SCALE13     -.3054**    -.4587**    -.2219**    -.2222**    -.2341**    -.1943*     -.2973**    -.0437      1.0000

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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                              - -  Correlation Coefficients  - -

             CHANGIND    SEXIND      RACEIND     GREV        GREQ        GREA        ETHNIC      UGPA        FATHED      MOTHED      ARTICIND

CHANGIND     1.0000         .           .         .1015      -.0320      -.0344         .        -.0144       .0839       .0754      -.0444
SEXIND          .        1.0000         .           .           .           .           .           .           .           .           .
RACEIND         .           .        1.0000         .           .           .           .           .           .           .           .
GREV          .1015         .           .        1.0000       .2899**     .6202**       .         .2041       .0321       .1763       .1259
GREQ         -.0320         .           .         .2899**    1.0000       .5911**       .         .3029**    -.0436      -.1348       .0725
GREA         -.0344         .           .         .6202**     .5911**    1.0000         .         .2285*      .1199       .0627       .1138
ETHNIC          .           .           .           .           .           .        1.0000         .           .           .           .
UGPA         -.0144         .           .         .2041       .3029**     .2285*        .        1.0000       .0257      -.0168       .1332
FATHED        .0839         .           .         .0321      -.0436       .1199         .         .0257      1.0000       .7196**    -.1218
MOTHED        .0754         .           .         .1763      -.1348       .0627         .        -.0168       .7196**    1.0000      -.1094
ARTICIND     -.0444         .           .         .1259       .0725       .1138         .         .1332      -.1218      -.1094      1.0000
HONORIND     -.0367         .           .        -.0039       .1286       .1228         .         .4529**     .0128      -.0917       .0356
UGPAM        -.1193         .           .         .1581       .3910**     .3613**       .         .7554**    -.0621      -.1074       .1048
UGPA2        -.1156         .           .         .1799       .2935**     .2729*        .         .7585**    -.0146      -.0731       .1126
WORKHOUR     -.0189         .           .        -.1385      -.0196       .0976         .         .2084      -.0987      -.1694      -.1031
COMMHOUR      .0330         .           .        -.0155      -.0759      -.0288         .        -.0916      -.0038      -.0715       .0585
SCIAWARD     -.0658         .           .         .2149       .2425*      .2811*        .         .0465      -.0185       .1009      -.0413
DEGOBJ       -.1194         .           .         .0231      -.0583      -.0601         .         .2382*      .0692       .1256       .2028
SCALE1        .0259         .           .        -.0041      -.0656      -.0117         .        -.1525       .0126       .1239      -.2116
SCALE2       -.3554**       .           .        -.1434      -.0689      -.0478         .         .1086       .0518      -.0733       .0622
SCALE3        .0928         .           .         .0381      -.1754      -.0682         .        -.1210      -.0038       .1821       .1003
SCALE4       -.1326         .           .        -.0052      -.2316*     -.1020         .         .0303       .1177       .1261       .1282
SCALE5       -.0531         .           .         .0838      -.1049       .0141         .         .0051       .0921       .1945       .1669
SCALE6       -.4343**       .           .        -.0260      -.0221       .0380         .         .0073       .0640       .0432       .1217
SCALE7        .1015         .           .         .0574      -.2080      -.0068         .         .0662      -.0024       .0124       .2346*
SCALE8       -.0156         .           .        -.1543       .2491*      .0884         .         .3499**     .0828      -.1075       .0335
SCALE9        .0513         .           .        -.1433      -.1757      -.1921         .         .3033**    -.0982      -.0806       .1236
SCALE10       .1196         .           .         .3520**    -.0349       .1804         .         .0113      -.0692       .0328      -.0812
SCALE11      -.2660*        .           .        -.1160      -.3286**    -.2332*        .         .0825      -.0306      -.0403       .1036
SCALE12      -.0393         .           .        -.0711      -.1911      -.1754         .         .0818      -.0224       .0045       .1116
SCALE13      -.0877         .           .        -.1402       .0600      -.0911         .        -.0617       .0309      -.0624      -.0409

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ   -                                  Page  39
14:03:31    CORRELATIONS FOR ASIAN FEMALE RESPONDENTS

                              - -  Correlation Coefficients  - -                                                  -

            HONORIND   UGPAM      UGPA2      WORKHOUR   COMMHOUR   SCIAWARD   DEGOBJ     SCALE1     SCALE2     SCALE3     SCALE4

CHANGIND    -.0367     -.1193     -.1156     -.0189      .0330     -.0658     -.1194      .0259     -.3554**    .0928     -.1326
SEXIND         .          .          .          .          .          .          .          .          .          .          .
RACEIND        .          .          .          .          .          .          .          .          .          .          .
GREV        -.0039      .1581      .1799     -.1385     -.0155      .2149      .0231     -.0041     -.1434      .0381     -.0052
GREQ         .1286      .3910**    .2935**   -.0196     -.0759      .2425*    -.0583     -.0656     -.0689     -.1754     -.2316*
GREA         .1228      .3613**    .2729*     .0976     -.0288      .2811*    -.0601     -.0117     -.0478     -.0682     -.1020
ETHNIC         .          .          .          .          .          .          .          .          .          .          .
UGPA         .4529**    .7554**    .7585**    .2084     -.0916      .0465      .2382*    -.1525      .1086     -.1210      .0303
FATHED       .0128     -.0621     -.0146     -.0987     -.0038     -.0185      .0692      .0126      .0518     -.0038      .1177
MOTHED      -.0917     -.1074     -.0731     -.1694     -.0715      .1009      .1256      .1239     -.0733      .1821      .1261
ARTICIND     .0356      .1048      .1126     -.1031      .0585     -.0413      .2028     -.2116      .0622      .1003      .1282
HONORIND    1.0000      .2712*     .3388**    .0940      .1175      .0026      .1870      .0161      .0958     -.2997**   -.0040
UGPAM        .2712*    1.0000      .8082**    .2990**   -.2271*     .2053      .1971     -.2127      .2668*     -.0391      .0756
UGPA2        .3388**    .8082**   1.0000      .3587**   -.2334*     .1107      .2660*    -.1929      .2421*    -.0947      .0854
WORKHOUR     .0948      .2990**    .3587**   1.0000     -.0938      .0930      .0935      .0698      .1409     -.1886      .0042
COMMHOUR     .1175     -.2271*    -.2334*    -.0938     1.0000     -.0943     -.0383     -.0035     -.0477     -.0046      .1493
SCIAWARD     .0026      .2053      .1107      .0930     -.0943     1.0000      .1147      .0290      .0390      .0480      .0870
DEGOBJ       .1870      .1971      .2660*     .0935     -.0383      .1147     1.0000     -.1201      .0839     -.1276      .1725
SCALE1       .0161     -.2127     -.1929      .0698     -.0035      .0290     -.1201     1.0000     -.3494**   -.3935**   -.1750
SCALE2       .0958      .2668*     .2421*     .1409     -.0477      .0390      .0839     -.3494**   1.0000      .2293*     .4258**
SCALE3      -.2997**   -.0391     -.0947     -.1886     -.0046      .0480     -.1276     -.3935**    .2293*    1.0000      .3220**
SCALE4      -.0040      .0756      .0854      .0042      .1493      .0870      .1725     -.1750      .4258**    .3220**   1.0000
SCALE5      -.0767      .0469      .0521     -.1143     -.0253      .1610     -.0500     -.2525*     .4140**    .4471**    .6086**
SCALE6       .1162      .1746      .1227     -.0556     -.0129      .2437*     .2603*    -.1925      .6468**    .0904      .4230**
SCALE7      -.1086      .0800      .0898     -.0576      .0862      .0604     -.1267     -.3067**    .3518**    .6335**    .4675**
SCALE8       .1816      .3442**    .3063**    .0597     -.0327      .1147      .0654     -.2674*     .3225**    .0010     -.0827
SCALE9       .1759      .1871      .2294*    -.0897      .0340      .0499      .1836     -.1043      .1127      .0194      .0238
SCALE10     -.0706     -.0829      .0055     -.1123      .0157      .0254     -.0004     -.0791     -.2007      .0687     -.0927
SCALE11      .0965      .0067      .1889      .0519      .0636     -.0174      .1291     -.0905      .3688**    .0318      .4287**
SCALE12      .0962      .0083     -.0282     -.0608      .1380     -.0646     -.1159     -.0993      .1985      .0998      .2118
SCALE13     -.2087     -.0783     -.1998      .0364     -.0824     -.1873     -.2326*     .0198     -.0949     -.0695     -.0738

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                     Page 40
14:03:31    CORRELATIONS FOR ASIAN FEMALE RESPONDENTS

                        - -  Correlation Coefficients  - -

             SCALE5     SCALE6     SCALE7     SCALE8     SCALE9     SCALE10    SCALE11    SCALE12    SCALE13

CHANGIND     -.0531     -.4343**    .1015     -.0156      .0513      .1196     -.2660*    -.0393     -.0877
SEXIND          .          .          .          .          .          .          .          .          .
RACEIND         .          .          .          .          .          .          .          .          .
GREV          .0838     -.0260      .0574     -.1543     -.1433      .3520**   -.1160     -.0711     -.1402
GREQ         -.1049     -.0221     -.2080      .2491*    -.1757     -.0349     -.3286**   -.1911      .0600
GREA          .0141      .0380     -.0068      .0884     -.1921      .1004     -.2332*    -.1754     -.0911
ETHNIC          .          .          .          .          .          .          .          .          .
UGPA          .0051      .0073      .0662      .3499**    .3033**    .0113      .0825      .0818     -.0617
FATHED        .0921      .0640     -.0024      .0828     -.0982     -.0692     -.0306     -.0224      .0309
MOTHED        .1945      .0432      .0124     -.1075     -.0006      .0328     -.0403      .0045     -.0624
ARTICIND      .1669      .1217      .2346*     .0335      .1236     -.0812      .1036      .1116     -.0409
HONORIND     -.0767      .1162     -.1086      .1016      .1759     -.0706      .0965      .0962     -.2087
UGPAM         .0469      .1746      .0800      .3442**    .1871     -.0829      .0067      .0083     -.0783
UGPA2         .0521      .1227      .0898      .3063**    .2294*     .0055      .1009     -.0282     -.1998
WORKHOUR     -.1143     -.0556     -.0576      .0597     -.0897     -.1123      .0519     -.0600      .0364
COMMHOUR     -.0253     -.0129      .0862     -.0327      .0340      .0157      .0636      .1380     -.0024
SCIAWARD      .1610      .2437*     .0604      .1147      .0499      .0254     -.0174     -.0646     -.1073
DEGOBJ       -.0500      .2603*    -.1267      .0654      .1036     -.0004      .1291     -.1159     -.2326*
SCALE1       -.2525*    -.1925     -.3067**   -.2674*    -.1043     -.0791     -.0905     -.0993      .0198
SCALE2        .4148**    .6468**    .3518**    .3225**    .1127     -.2007      .3688**    .1905     -.0949
SCALE3        .4471**    .0904      .6335**    .0010      .0194      .0687      .0318      .0998     -.0695
SCALE4        .6086**    .4230**    .4675**   -.0027      .0238     -.0927      .4287**    .2118     -.0738
SCALE5       1.0000      .3609**    .5694**   -.0222     -.0209     -.0165      .3315**    .1141     -.1123
SCALE6        .3609**   1.0000      .1291      .1806      .0958     -.0095      .2679*     .1378     -.2177*
SCALE7        .5694**    .1291     1.0000     -.0429      .1208     -.1074      .2439*     .2881**   -.0579
SCALE8       -.0222      .1806     -.0429     1.0000      .4059**    .1868      .0646      .0759     -.2591*
SCALE9       -.0209      .0958      .1208      .4059**   1.0000      .2110      .3305**    .1923     -.3051**
SCALE10      -.0165     -.0095     -.1074      .1868      .2110     1.0000     -.1068      .0912     -.2872**
SCALE11       .3315**    .2679*     .2439*     .0646      .3305**   -.1068     1.0000      .1353     -.1995
SCALE12       .1141      .1378      .2881**    .0759      .1923      .0912      .1353     1.0000     -.1532
SCALE13      -.1123     -.2177*    -.0579     -.2591*    -.3051**   -.2872**   -.1995     -.1532     1.0000

* - Signif. LE .05     ** - Signif. LE .01     (2-tailed)          " . " printed if a coefficient cannot be computed
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                          - -  Correlation Coefficients  - -

           CHANGIND   SEXIND     RACEIND   GREV       GREQ       GREA       ETHNIC     UGPA       FATHED     MOTHED     ARTICIND

CHANGIND   1.0000     .0669      .         -.0892     -.0157     .0208      .0662      -.0403     .0197      -.1184     -.0829
SEXIND     .0669      1.0000     .         -.2191*    -.3829**   -.1321     .3867**    -.0721     .0991      .1236      .0975
RACEIND    .          .          1.0000    .          .          .          .          .          .          .          .
GREV       -.0892     -.2191*    .         1.0000     .6428**    .7182**    -.0372     .2741**    .1214      .2427**    -.0855
GREQ       -.0157     -.3829**   .         .6420**    1.0000     .6878**    -.1588     .3820**    .0216      .0489      -.0967
GREA       .0208      -.1321     .         .7182**    .6878**    1.0000     -.0397     .2592**    .1368      .2180*     -.0941
ETHNIC     .0662      .3867**    .         -.0372     -.1588     -.0397     1.0000     .0173      .2178*     .2693**    .0375
UGPA       -.0403     -.0721     .         .2741**    .3820**    .2592**    .0173      1.0000     .0773      .1295      .0298
FATHED     .0197      .0991      .         .1214      .0216      .1368      .2178*     .0773      1.0000     .6045**    .2543**
MOTHED     -.1184     .1236      .         .2427**    .0489      .2180*     .2693**    .1295      .6045**    1.0000     .1080
ARTICIND   -.0829     .0975      .         -.0855     -.0967     -.0941     .0375      .0298      .2543**    .1080      1.0000
HONORIND   -.1019     -.0176     .         .0837      .0818      .0358      -.0980     .5104**    .0670      .1141      .0602
UGPAM      -.0099     -.0880     .         .2954**    .3828**    .3202**    .0554      .8076**    .0823      .0502      .0506
UGPA2      -.0074     -.0391     .         .2173*     .3407**    .2071*     -.0182     .8456**    .0250      .0891      .0615
WORKHOUR   .1360      .1744*     .         .0317      -.0536     -.0041     .0579      -.1169     -.0982     .0334      .0703
COMMHOUR   .1304      .1797*     .         -.0602     -.1085     -.0497     -.0333     -.0494     -.1710     -.2023*    -.1637
SCIAWARD   .0522      .1044      .         .1383      .1463      .1333      .0603      .2823**    -.0295     -.0347     .2029*
DEGOBJ     -.0168     .0261      .         .1466      -.0082     .0755      .0166      .2251*     -.0165     .1493      .0719
SCALE1     .0577      .0533      .         -.2575**   -.2930**   -.2116*    -.1413     -.1952*    -.0244     -.0961     .0498
SCALE2     -.2079*    .0844      .         -.1144     -.0936     -.1764*    -.0770     .0343      -.0007     .0019      .2030*
SCALE3     -.1083     .0626      .         .0854      .1130      .1234      -.0433     .1834*     -.0114     -.0561     -.0715
SCALE4     -.1161     .0647      .         .0075      .0578      .0804      .0893      .2873**    .0137      .0255      .0223
SCALE5     -.0449     .1561      .         -.0644     -.0195     -.0017     .1113      .1327      .1432      .0868      .0071
SCALE6     -.3110**   -.0785     .         -.0436     -.0389     -.1758*    -.0113     .0630      -.0388     -.1538     .2254**
SCALE7     -.0816     .0847      .         .0019      .0606      -.0012     .0120      .0266      .0468      -.0213     .1067
SCALE8     -.0366     -.1313     .         .2434**    .3914**    .2326**    .1083      .4837**    .0941      .0889      .0153
SCALE9     .0816      -.0151     .         -.2289**   -.0915     -.2787**   .0799      .1799*     .0182      .0113      .1683
SCALE10    -.0017     .0203      .         .2686**    .0480      .1389      .1330      .1601      .1924*     .2287**    .0928
SCALE11    -.0143     .1388      .         -.1427     -.1681     -.1364     .0431      .1066      .0880      .0814      .2443**
SCALE12    -.2412**   -.1636     .         -.0087     .0464      -.0474     -.0395     .0019      -.1055     -.1464     -.0525
SCALE13    .0167      .0090      .         -.0503     .0514      -.0071     -.0895     -.1956*    -.0037     .0078      -.2514**

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)        " . " printed if a coefficient cannot be computed
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- - Correlation Coefficients - -

	HONORIND	UGPAM	UGPA2	WORKHOUR	COMMHOUR	SCIAWARD	DEGOBJ	SCALE1	SCALE2	SCALE3	SCALE4
CHANGIND	-.1019	-.0099	-.0074	.1360	.1304	.0522	-.0168	.0577	-.2079*	-.1003	-.1161
SEXIND	-.0176	-.0880	-.0391	.1744*	.1797*	.1044	.0261	.0533	.0044	.0626	.0647
RACEIND	.	.	.	.	.	.	.	.	.	.	.
GREV	.0837	.2954**	.2173*	.0317	-.0602	.1383	.1466	-.2575**	-.1144	.0854	.0075
GREQ	.0818	.3828**	.3407**	-.0536	-.1085	.1463	-.0082	-.2930**	-.0936	.1130	.0570
GREA	.0358	.3202**	.2071*	-.0041	-.0497	.1333	.0755	-.2116*	-.1764*	.1234	.0004
ETHNIC	-.0980	.0554	-.0182	.0579	-.0333	.0603	.0166	-.1413	-.0770	-.0433	.0893
UGPA	.5184**	.8076**	.8456**	-.1169	-.0494	.2823**	.2251*	-.1952*	.0343	.1834*	.2873**
FATHED	.0670	.0823	.0250	-.0982	-.1710	-.0295	-.0165	-.0244	-.0007	-.0114	.0137
MOTHED	.1141	.0582	.0891	.0334	-.2023*	-.0347	.1493	-.0961	.0019	-.0561	.0255
ARTICIND	.0602	.0506	.0615	.0703	-.1637	.2029*	.0719	.0498	.2030*	-.0715	.0223
HONORIND	1.0000	.3959**	.4513**	-.1856*	.0374	.1759*	.2089*	-.0575	.1122	.0688	.1540
UGPAM	.3959**	1.0000	.8037**	-.0576	-.0376	.2608**	.1201	-.2566**	.0669	.1336	.3044**
UGPA2	.4513**	.8037**	1.0000	-.0377	-.0341	.2064*	.1369	-.2283**	.1231	.1686	.3451**
WORKHOUR	-.1856*	-.0576	-.0377	1.0000	.1440	.0269	-.0041	-.0796	-.1003	.0232	-.0928
COMMHOUR	.0374	-.0376	-.0341	.1440	1.0000	-.0344	.2305**	.1379	-.1765*	-.0878	-.0318
SCIAWARD	.1759*	.2608**	.2064*	.0269	-.0344	1.0000	.2441**	-.0985	.1104	.1016	.2430**
DEGOBJ	.2089*	.1201	.1369	-.0041	.2305**	.2441**	1.0000	-.1092	.0430	-.0666	.0869
SCALE1	-.0575	-.2566**	-.2283**	-.0796	.1379	-.0985	-.1092	1.0000	-.1954*	-.2566**	-.3155**
SCALE2	.1122	.0669	.1231	-.1003	-.1765*	.1104	.0430	-.1954*	1.0000	.2043**	.2420**
SCALE3	.0688	.1336	.1686	.0232	-.0878	.1016	-.0666	-.2566**	.2043**	1.0000	.4152**
SCALE4	.1540	.3044**	.3451**	-.0928	-.0318	.2430**	.0869	-.3155**	.2420**	.4152**	1.0000
SCALE5	.0656	.1607	.1333	-.0239	-.0746	.0266	-.1373	-.0780	.1447	.2904**	.3949**
SCALE6	.1220	.1210	.1314	-.0815	-.0802	.2220*	.1039	-.1695	.4121**	.1924*	.2745**
SCALE7	-.0576	-.0245	.0235	-.0900	-.1415	.0556	-.2021*	.1055	.2806**	.4041**	.2967**
SCALE8	.1528	.5113**	.4964**	.0072	-.1022	.1457	.0428	-.2656**	.0205	.0417	.2384**
SCALE9	.0386	.1022	.2639**	-.0624	-.0639	.0539	.0120	-.0036	.0702	.0344	.1133
SCALE10	.0771	.2119*	.1953*	.0046	-.0167	.0795	.0477	-.0720	-.0726	-.1120	.1001
SCALE11	.0122	.0669	.2167*	-.0418	.1006	.1625	-.0503	.0719	.2642**	.1806*	.4604**
SCALE12	.1932*	-.0149	.0230	-.0883	.0375	-.1056	-.0551	-.0093	-.0379	.0953	-.0216
SCALE13	-.1429	-.1457	-.1492	.0555	-.0413	-.2530**	-.2599**	.1223	-.3522**	-.1900*	-.1573

* - Signif. LE .05 ** - Signif. LE .01 (2-tailed) " . " printed if a coefficient cannot be computed

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                          - -  Correlation Coefficients  - -

            SCALE5     SCALE6     SCALE7     SCALE8     SCALE9     SCALE10    SCALE11    SCALE12    SCALE13

CHANGIND    -.0449     -.3110**   -.0816     -.0366      .0816     -.0017     -.0143     -.2412**    .0167
SEXIND       .1561     -.0785      .0047     -.1313     -.0151      .0203      .1388     -.1636      .0090
RACEIND       .           .          .          .          .          .          .          .          .
GREV        -.0644     -.0436      .0019      .2434**   -.2289**    .2686**   -.1427     -.0087     -.0503
GREQ        -.0195     -.0389      .0606      .3914**   -.0915      .0480     -.1681      .0464      .0514
GREA         0017      -.1758*    -.0012      .2326**   -.2787**    .1369     -.1364     -.0474     -.0071
ETHNIC       .1113     -.0113      .0120      .1083      .0799      .1330      .0431     -.0395     -.0895
UGPA         .1327      .0630      .0266      .4037**    .1799*     .1601      .1066      .0019     -.1956*
FATHED       .1432     -.0388      .0468      .0941      .0182      .1924*     .0880     -.1055     -.0037
MOTHED       .0068     -.1530     -.0213      .0089      .0113      .2287**    .0014     -.1464      .0078
ARTICIND     .0071      .2254**    .1067      .0153      .1683      .0920      .2443**   -.0525     -.2514**
HONORIND     .0656      .1220     -.0576      .1528      .0386      .0771      .0122      .1932*    -.1429
UGPAM        .1607      .1210     -.0245      .5113**    .1022      .2119*     .0669     -.0149     -.1457
UGPA2        .1333      .1314      .0235      .4964**    .2639**    .1953*     .2167*     .0238     -.1492
WORKHOUR    -.0239     -.0815     -.0900      .0072     -.0624      .0046     -.0418     -.0883      .0555
COMMHOUR    -.0746     -.0802     -.1415     -.1022     -.0639     -.0167      .1006      .0375     -.0413
SCIAWARD     .0266      .2220*     .0556      .1457      .0539      .0795      .1625     -.1056     -.2538**
DEGOBJ      -.1373      .1039     -.2021*     .0428      .0120      .0477     -.0503     -.0551     -.2599**
SCALE1      -.0780     -.1695      .1055     -.2656**   -.0036     -.0720      .0719     -.0093      .1223
SCALE2       .1447      .4121**    .2886**    .0205      .0702     -.0726      .2642**   -.0379     -.3522**
SCALE3       .2984**    .1924*     .4841**    .0417      .0344     -.1120      .1806*     .0953     -.1900*
SCALE4       .3949**    .2745**    .2967**    .2384**    .1133      .1081      .4604**   -.0216     -.1573
SCALE5      1.0000     -.0121      .3692**    .0635     -.0192      .0903      .3400**    .0344      .0221
SCALE6      -.0121     1.0000      .1781*     .1547      .1149      .0536      .1723      .2500**   -.3861**
SCALE7       .3692**    .1781*    1.0000      .1333      .2904**    .0133      .3606**    .1272     -.1802*
SCALE8       .0635      .1547      .1333     1.0000      .3949**    .4482**    .1530      .1031     -.1228
SCALE9      -.0192      .1149      .2904**    .3949**   1.0000      .3043**    .3479**    .0255     -.1849*
SCALE10      .0903      .0536      .0133      .4482**    .3043**   1.0000      .2213*    -.0390     -.0771
SCALE11      .3400**    .1723      .3606**    .1530      .3479**    .2213*    1.0000     -.0392     -.2578**
SCALE12      .0344      .2500**    .1272      .1031      .0255     -.0390     -.0392     1.0000     -.0594
SCALE13      .0221     -.3861**   -.1802*    -.1228     -.1849*    -.0771     -.2578**   -.0594     1.0000

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)        " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ                                    Page  48
14:03:37    CORRELATIONS FOR HISPANIC FEMALE RESPONDENTS

                                  - -  Correlation Coefficients  - -

            CHANGIND    SEXIND    RACEIND      GREV       GREQ       GREA      ETHNIC      UGPA      FATHED     MOTHED    ARTICIND

CHANGIND     1.0000      .0298      .        -.0786     -.0444     -.0881      .1752     -.0194      .0271     -.0777     -.0779
SEXIND        .0298     1.0000      .        -.1383     -.2921**   -.0085     -.4256**   -.0621     -.0933     -.0772      .0393
RACEIND       .          .         1.0000     .          .          .          .          .          .          .          .
GREV         -.0786     -.1383      .        1.0000      .6502**    .7707**    .1035      .3065**    .1613      .2465**   -.0887
GREQ         -.0444     -.2921**    .         .6502**   1.0000      .6929**    .1426      .4300**    .1023      .1129     -.1089
GREA         -.0881     -.0085      .         .7707**    .6929**   1.0000     -.0167      .3139**    .1835      .2368*    -.1098
ETHNIC        .1752     -.4256**    .         .1035      .1426     -.0167     1.0000     -.0709      .1334      .1392      .0308
UGPA         -.0194     -.0621      .         .3065**    .4300**    .3139**   -.0709     1.0000      .0691      .0706      .0521
FATHED        .0271     -.0933      .         .1613      .1023      .1835      .1334      .0691     1.0000      .5620**    .2740**
MOTHED       -.0777     -.0772      .         .2465**    .1129      .2368*     .1392      .0706      .5620**   1.0000      .1566
ARTICIND     -.0779      .0393      .        -.0887     -.1089     -.1098      .0308      .0521      .2740**    .1566     1.0000
HONORIND     -.0569      .0148      .         .1032      .1374      .1117     -.0331      .5247**    .1385      .1988*     .0775
UGPAM         .0057     -.1145      .         .3183**    .4240**    .3436**    .0129      .8112**    .1011      .0138      .1225
UGPA2         .0239     -.0607      .         .2135*     .3935**    .2553**    .0380      .8345**   -.0108      .0761      .1059
WORKHOUR      .2013*     .1707      .         .0451     -.0232      .0305      .0612     -.1088     -.1300     -.0070      .0242
COMMHOUR      .1273      .1922*     .        -.0410     -.1535     -.1342      .0240     -.0359     -.1138     -.1444     -.1611
SCIAWARD      .0978      .0700      .         .1288      .1737      .0972     -.0087      .3111**   -.0279     -.0515      .2551**
DEGOBJ       -.0061      .0466      .         .2367*     .0955      .1306     -.0035      .2758**    .0670      .2042*     .1198
SCALE1        .0609      .0657      .        -.2899**   -.3080**   -.2630**   -.0468     -.2067*     .0955      .0460      .1493
SCALE2       -.1732      .1487      .        -.1122     -.0453     -.1409     -.0421      .1528      .0376      .0372      .2209*
SCALE3       -.1125      .1546      .         .0656      .1241      .1276     -.1629      .2139*    -.0172     -.0439     -.0026
SCALE4       -.1195      .0304      .         .0435      .2165*     .1227     -.0415      .3760**   -.0453     -.0362     -.0226
SCALE5       -.0231      .1644      .        -.0507      .0747      .0983     -.1563      .1209      .0611      .0067     -.0632
SCALE6       -.2935**   -.1507      .        -.0393      .0072     -.1537      .1487      .1797     -.0323     -.0752      .2645**
SCALE7       -.1034      .1089      .        -.0352      .0650      .0034     -.0334      .1230      .0948      .1055      .1360
SCALE8       -.0216     -.2514**    .         .2737**    .4780**    .2906**    .1267      .5427**    .1050      .0596      .1598
SCALE9        .1310     -.0526      .        -.3047**   -.0081     -.3057**   -.0313      .2319*    -.0336     -.0108      .2214*
SCALE10      -.0099     -.0083      .         .2995**    .0924      .2164*     .0368      .1868      .1973*     .2494**    .0843
SCALE11      -.0108      .1136      .        -.1701     -.1146     -.1774     -.0452      .2467**    .0996      .1360      .2785**
SCALE12      -.2605**   -.1280      .         .0121      .0039      .0411     -.0140     -.0056     -.1288     -.0965     -.0524
SCALE13      -.0417      .0342      .        -.0238     -.0318     -.0174     -.0274     -.2187*     .0088     -.0320     -.2333*

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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                                  - -  Correlation Coefficients  - -

             HONORIND    UGPAM       UGPA2      WORKHOUR    COMMHOUR    SCIAWARD    DEGOBJ      SCALE1      SCALE2      SCALE3      SCALE4

CHANGIND     -.0569      .0057       .0239      .2013*      .1273       .0970       -.0061      .0609       -.1732      -.1125      -.1195
SEXIND        .0148     -.1145      -.0607      .1707       .1922*      .0700        .0466      .0657        .1487       .1546       .0304
RACEIND        .           .           .          .           .           .            .          .            .           .           .
GREV          .1032      .3103**     .2135*     .0451      -.0410       .1288        .2367*    -.2899**     -.1122       .0656       .0435
GREQ          .1374      .4240**     .3935**   -.0232      -.1535       .1737        .0955     -.3800**     -.0453       .1241       .2165*
GREA          .1117      .3436**     .2553**    .0305      -.1342       .0972        .1306     -.2630**     -.1409       .1276       .1227
ETHNIC       -.0331      .0129       .0300      .0612       .0240      -.0007       -.0035     -.0460       -.0421      -.1629      -.0415
UGPA          .5247**    .8112**     .8345**   -.1088      -.0359       .3111**      .2750**   -.2067*       .1520       .2139*      .3760**
FATHED        .1385      .1011      -.0100     -.1300      -.1130      -.0279        .0670      .0955        .0376      -.0172      -.0453
MOTHED        .1980*     .0130       .0761     -.0070      -.1444      -.0515        .2042*     .0460        .0372      -.0439      -.0362
ARTICIND      .0775      .1225       .1059      .0242      -.1611       .2551**      .1190      .1493        .2209*     -.0826      -.0226
HONORIND     1.0000      .3800**     .4834**   -.1377      -.0345       .2732**      .2212*    -.0711        .1604       .0901       .2129*
UGPAM         .3800**   1.0000       .7416**   -.0492      -.0132       .2940**      .1630     -.2220*       .1204       .0733       .3140**
UGPA2         .4834**    .7416**    1.0000      .0393      -.0493       .2795**      .1621     -.2266*       .2324*      .2253*      .4689**
WORKHOUR     -.1377     -.0492       .0393     1.0000       .1105       .0678        .0190     -.0436       -.1963*      .1402       .0060
COMMHOUR     -.0345     -.0132      -.0493      .1105      1.0000      -.0003        .1664      .1559       -.1937*     -.2075*     -.1200
SCIAWARD      .2732**    .2940**     .2795**    .0678      -.0003      1.0000        .1715     -.1267        .1008       .1165       .2657**
DEGOBJ        .2212*     .1630       .1621      .0190       .1664       .1715       1.0000     -.1329        .1111      -.0221       .0734
SCALE1       -.0711     -.2220*     -.2266*    -.0436       .1559      -.1267       -.1329     1.0000       -.2778**    -.2046**    -.3221**
SCALE2        .1604      .1204       .2324*    -.1963*     -.1937*      .1008        .1111     -.2778**     1.0000       .2500**     .2718**
SCALE3        .0901      .0733       .2253*     .1402      -.2075*      .1165       -.0221     -.2046**      .2500**    1.0000       .4793**
SCALE4        .2129*     .3140**     .4689**    .0060      -.1200       .2657**      .0734     -.3221**      .2718**     .4793**    1.0000
SCALE5       -.0022      .1426       .0805     -.0600      -.1145      -.0303       -.1021     -.0596        .1500       .3410**     .3347**
SCALE6        .1628      .2117*      .2452*    -.0849      -.0955       .1428        .2079*    -.2862**      .4577**     .1327       .2686**
SCALE7        .0106      .0040       .1132     -.0257      -.2346*      .0664       -.1553      .0599        .3085**     .5027**     .3430**
SCALE8        .2908**    .5510**     .5404**   -.0140      -.1086       .1911        .0751     -.1955*       .0060       .0244       .2227*
SCALE9        .1693      .1111       .3100**   -.1394      -.0660       .1310        .0046      .0516        .2619**     .1020       .2070*
SCALE10       .1153      .2683**     .2233*     .0122      -.0202       .0003        .0001      .0155       -.1057      -.1199      -.0035
SCALE11       .1347      .1591       .3210**   -.0689       .0363       .2411*      -.0402      .0202        .3054**     .1891*      .4404**
SCALE12       .1765     -.0290       .1005     -.0262      -.0260      -.0044       -.0043     -.0632       -.0237       .1772       .0972
SCALE13      -.1667     -.1177      -.2242*    -.0343      -.0104      -.2111*      -.2652**    .1773       -.3070**    -.0940      -.0049

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)          " . " printed if a coefficient cannot be computed
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15-Oct-91   CORRELATIONS OF SCALE SCORES WITH INDICATORS, SCORES AND BQ
14:03:37    CORRELATIONS FOR HISPANIC FEMALE RESPONDENTS

                         - -  Correlation Coefficients  - -

             SCALE5     SCALE6     SCALE7     SCALE8     SCALE9     SCALE10    SCALE11    SCALE12    SCALE13

CHANGIND     -.0231     -.2935**   -.1034     -.0216      .1310     -.0099     -.0108     -.2605**   -.0417
SEXIND        .1644     -.1507      .1089     -.2514**   -.0526     -.0883      .1136     -.1280      .0342
RACEIND        .          .          .          .          .          .          .          .          .
GREV         -.0587     -.0393     -.0352      .2737**   -.3047**    .2995**   -.1701      .0121     -.0238
GREQ          .0747      .0072      .0650      .4780**   -.0881      .0924     -.1146      .0839     -.0318
GREA          .0983     -.1537      .0034      .2908**   -.3057**    .2164*    -.1774      .0411     -.0174
ETHNIC       -.1563      .1487     -.0334      .1267     -.0313      .0868     -.0452     -.0140     -.0274
UGPA          .1209      .1797      .1230      .5427**    .2319*     .1060      .2467**   -.0056     -.2187*
FATHED        .0611     -.0323      .0948      .1050     -.0336      .1973*     .0996     -.1288      .0088
MOTHED        .0067     -.0752      .1055      .0596     -.0108      .2494**    .1360     -.0965     -.0320
ARTICIND     -.0632      .2645**    .1360      .1598      .2214*     .0843      .2785**   -.0524     -.2333*
HONORIND     -.0022      .1628      .0106      .2908**    .1693      .1153      .1347      .1765     -.1667
UGPAM         .1426      .2117*     .0040      .5518**    .1111      .2683**    .1591     -.0290     -.1177
UGPA2         .0805      .2452*     .1132      .5484**    .3108**    .2233*     .3218**    .1085     -.2242*
WORKHOUR     -.0600     -.0849     -.0257     -.0140     -.1394      .0122     -.0689     -.0262     -.0343
COMMHOUR     -.1145     -.0955     -.2346*    -.1086     -.0668     -.0202      .0363     -.0260     -.0104
SCIAWARD     -.0383      .1428      .0664      .1911      .1310      .0883      .2411*    -.0044     -.2111*
DEGOBJ       -.1821      .2079*    -.1553      .0751      .0046      .0001     -.0402     -.0843     -.2652**
SCALE1       -.0596     -.2862**    .0599     -.1955*     .0516      .0155      .0202     -.0632      .1773
SCALE2        .1588      .4577**    .3085**    .0860      .2619**   -.1057      .3054**   -.0237     -.3070**
SCALE3        .3418**    .1327      .5027**    .0244      .1020     -.1199      .1891*     .1772     -.0940
SCALE4        .3347**    .2686**    .3438**    .2227*     .2078*    -.0035      .4404**    .0972     -.0849
SCALE5       1.0000     -.1185      .3778**   -.0115      .0055     -.0270      .3333**    .0926      .0490
SCALE6       -.1185     1.0000      .1093      .2502**    .1934*     .0616      .1892*     .2854**   -.3075**
SCALE7        .3778**    .1093     1.0000      .1753      .3310**   -.0410      .3902**    .1723     -.1382
SCALE8       -.0115      .2502**    .1753     1.0000      .3247**    .4292**    .1965*     .1784     -.2861**
SCALE9        .0055      .1934*     .3310**    .3247**   1.0000      .1301      .5074**    .1196     -.3122**
SCALE10      -.0270      .0616     -.0410      .4292**    .1301     1.0000      .1715      .0348      .0042
SCALE11       .3333**    .1892*     .3902**    .1965*     .5074**    .1715     1.0000      .0341     -.2119*
SCALE12       .0926      .2854**    .1723      .1784      .1196      .0348      .0341     1.0000     -.1796
SCALE13       .0490     -.3075**   -.1382     -.2861**   -.3122**    .0042     -.2119*    -.1796     1.0000

* - Signif. LE .05    ** - Signif. LE .01    (2-tailed)        " . " printed if a coefficient cannot be computed
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